

THE RAILWAY GAZETTE

A Journal of Management, Engineering and Operation
INCORPORATING

Railway Engineer • TRANSPORT • The Railway Review

The Railway Times Herapath's Railway Journal RAILWAY RECORD.

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ELECTRIC RAILWAY TRACTION

A Supplement illustrating and describing developments in Electric Railway Traction is presented with every copy of this week's issue. Accompanying this is an index to the Electric Railway Traction Supplements for the year 1939

DISPATCH OF "THE RAILWAY GAZETTE" OVERSEAS

We would remind our readers that there are many overseas countries to which it is not permissible for private individuals to send printed journals and newspapers. THE RAILWAY GAZETTE possesses the necessary permit and machinery for such dispatch, and any reader desirous of arranging for copies to be delivered to an agent or correspondent overseas should place the order with us together with the necessary delivery instructions.

We would emphasise that copies addressed to places in Great Britain should not be re-directed to places overseas, as they are stopped under the provisions of Statutory Rules and Orders 1939, No. 1440

TO CALLERS AND TELEPHONERS

Consequent on the war and the blackout regulations, as an emergency measure to assist our staff in getting home before it is fully dark, our office hours (without a lunch interval) until Saturday, February 10, 1940, are:—

Mondays to Fridays - 9 a.m. till 3.15 p.m.

Saturdays - 9 a.m. till 1 p.m.

The Railways of Finland

WHEN its first railway was opened in 1862, Finland was a part of the Russian Empire, with the result that the Russian 5-ft. gauge became the standard of the country. The Finnish railway system, of which some present-day activities and developments are described in an article on page 736, has not yet lent itself to high speeds, although the use in recent years of coal-burning locomotives on all express trains has effected some acceleration, so that the best runs now show averages in the forties. What probably strikes the visitor to Finland most is the remarkable and much-pictured architecture of Helsinki station, the cleanliness and punctuality of the trains, and the tidy habits of the passengers. Litter in compartments is almost unknown; the natives scrupulously place cigarette cartons, empty matchboxes, and the like in the receptacle provided on the floor, while, should the foreign visitor defile the neatness of the carriage, the evidence of his offence is quickly removed by a travelling *vigilante* with brush and dustpan. The system connects with the Swedish railways at Haparanda, where there is a break of gauge, and with the Russian lines at Rajajoki. In normal circumstances through passenger working with Russia has been confined to one through coach each way daily between Helsinki and Leningrad.

* * * *

Anglo-French Co-ordinating Committee

The arrangements for the co-ordination of the economic war efforts of Great Britain and France, provide for the immediate setting-up of Permanent Anglo-French Executive Committees under an Anglo-French Co-ordinating Committee of which M. Jean Monnet has been appointed by the British and French Prime Ministers to be the Allied Chairman. The functions of this committee will be to co-ordinate the work of the Permanent Executive Committees; to deal with any difficulties arising out of the supply and purchase of munitions, food, coal, and other commodities, or which raise important questions of principle or priority; and also to handle the work of Allied Purchasing Missions abroad. Arrangements have now been completed for the joint purchase of armaments and aircraft in Canada and the United States. In Canada these purchases will be made through the Canadian War Supply Board. In the U.S.A. the existing British and French Missions have been placed under the direction of an Anglo-French board of which Mr. Arthur Purvis, a Director of the Canadian Pacific Railway, has been appointed Chairman.

* * * *

The Nearest to Normal

The L.N.E.R. is to be congratulated on the wide scope of the improvements in its train services from December 4, when, as recorded in detail on page 746, an entirely new timetable was brought into operation. Over the East Coast main line from King's Cross to Doncaster, York, and Edinburgh, there has been, in effect, no piecemeal improvement, but a complete recasting of the service, in which—with the exception of the streamlined flyers and the Pullman trains—practically the entire normal series of trains has been restored. Further, by timing the trains up to the limit of the 50 m.p.h. from start to stop now laid down as the maximum permissible speed, and by cutting down stops—particularly the long halts for refreshments—enormous accelerations have been made. For example, the down Flying Scotsman has its King's Cross—Edinburgh time cut by 80 min. to 8 hr. 25 min.; the 1.0 p.m. (late 12.30 p.m.) is accelerated 78 min. to Newcastle and extended to Edinburgh; the 8 a.m. from Newcastle reaches King's Cross 62 min. earlier, and the 4 p.m. from King's Cross leaves London an hour later and reaches Tyneside

10 min. earlier. Among other improvements, it is once again possible to reach Aberdeen from King's Cross without night travel; through coaches are restored between King's Cross and both Bradford and Harrogate; and a late evening sleeping car service to Scotland is provided from King's Cross at 11.30 p.m. The comfort of the inner man is assured by the widespread scale on which restaurant and buffet cars have been restored, extending even to such services as many of those between Newcastle and Middlesbrough and Newcastle and Carlisle. The only area of the L.N.E.R. which is entitled to regard itself as neglected in these improvements is the Midlands; the Great Central main line still has only two semi-fast trains in each direction running on its Marylebone—Sheffield section, in striking contrast to the last war, when it boasted the fastest and least-affected service in Great Britain.

* * * *

Gold Coast Railway

The cocoa crop for the year 1937-38 was held up, and in the year ended March 31, 1939, on which the report has now been issued, 106,000 tons of cocoa were carried which under normal conditions should have been railed in the previous year. This accounts mainly for the increase of £268,448 or 29.06 per cent. in the gross earnings for 1938-39, notwithstanding the heavy decrease of 298,063 tons in manganese ore traffic. Passenger numbers were less by 78,382 or 2.29 per cent., and passenger receipts declined by £11,449 or 5.95 per cent. Paying goods, although less in quantity by 174,217 tons or 17.34 per cent., brought in £276,991, or 41.61 per cent., more revenue.

	1937-38	1938-39
Passengers	3,436,478	3,357,796
Paying goods, tons .. .	1,004,876	830,659
Paying train-miles .. .	1,273,280	1,272,000
Operating ratio (excl. renewals) ..	53.95 per cent.	42.11 per cent.
Gross earnings	923,634	1,192,082
Expenditure (incl. renewals) .. .	519,914	764,411
Net earnings	403,720	427,671
Loan charges and sinking fund ..	403,720	403,665
Surplus	—	24,006

The rise of £244,497 in total expenditure is mainly accounted for by the allocation of £262,470 to renewals fund in 1938-39, against £21,606 in the previous year.

* * * *

Canadian Railways in 1938

In the year 1938 the gross earnings of the Canadian railways aggregated collectively \$333,094,287, as compared with \$355,103,271 in 1937, a decrease of 6.2 per cent. Working expenses also showed a decrease, the total being \$293,443,093, against \$300,652,548 in 1937, a difference of 3.4 per cent. There was consequently a serious reduction in net earnings, of no less than 27.2 per cent., the 1937 figure being \$54,450,723 and that of 1938 \$39,651,194. Tonnage of revenue freight carried declined by 7.6 per cent. to 75,780,355 tons from 81,995,161 tons in 1937. The tonnage of agricultural products had increased by over 27 per cent., to 17,521,236 tons from 13,707,581 tons, but this was more than offset by the fall in tonnage of other classes of freight. The Transport Act, adopted by Parliament and assented to on July 1, 1938, set up a Board of Transport Commissioners for Canada, in substitution for the former Board of Railway Commissioners. This is an important development in view of the ever increasing competition of road transport. One feature of the Act, relating to agreed charges, is already giving good results. The foregoing information is given in the Report on Economic and Commercial Conditions in Canada, issued by the Department of Overseas Trade.

Transport of Tropical Fruits

Research into the conditions attending cold storage and transport of tropical fruits is the subject of a paper published in the "Proceedings of the British Association of Refrigeration." The author, Dr. C. W. Wardlaw, of the Low Temperature Research Station of the Imperial College of Tropical Agriculture at Trinidad, B.W.I., records steady and continuous success in the work of transporting tropical fruits from plantation to overseas market. Nevertheless, the care and treatment of such fruits, with a few notable exceptions, is in its infancy, and with the improvement in transport facilities it may be expected that an immense variety of exotic products will in time reach temperate countries. Citrus fruits and bananas are now standard commodities; pineapples, mangoes, and avocados are also transported in small quantities, but there is a host of other fruits which are seldom or never exported. Research begins, of course, on the plantation. Rail transport is limited, as a rule, to the light railway from plantation to main-line station, and thence to the coast. Storage at ports offers a problem which may be solved by the establishment of pre-cooling stations, and in this respect again, there is ample field for the refrigerating engineer. Once the fruit is embarked the difficulties are more easily dealt with, but even on refrigerated ships there are still many problems awaiting solution.

* * * *

Calorific Value of Coal

Although there is much to be said for the suggestion that the correct basis upon which locomotive coal should be sold is that of calorific value, it should be remembered that it does not necessarily follow that the coal with the highest calorific value will yield the highest boiler efficiency. In the house journal of a firm specialising in the economical production of steam, there appears an article in which the author discusses the various factors—other than calorific value—which may affect the efficiency of a boiler. Thus, the coking propensity of a coal has an important influence upon the manner in which it will burn, since excessive coking power causes waste due to some of the fuel passing from the grate with the ash before it is completely burnt. Moreover, the coking may leave holes in the firebed through which excessive amounts of air will enter. Again, the nature of the ash rather than its amount will affect the efficiency of the boiler, an ash which is readily fusible leading to the rapid formation of clinker which does not permit of a free flow of air through the firebed. The hydrogen content of the coal, it is shown, also has an important bearing on the efficiency of combustion.

* * * *

Comparative Success of Indian "XC" Pacifics

Sir Andrew Clow, Member for Railways, in moving the consideration, by the Indian Legislative Assembly, of the Pacific Locomotive Committee's Report, made several interesting points testifying to the comparative success of the "XC" or heaviest of the standard Pacific types. He pointed out that engines of this class had for many years been in service between Lahore and Karachi, on the North Western system, without any special speed restriction (until the general one for all "X" class engines) but on a well-maintained 90-lb. flat-bottom track. There, six of them did the work of ten of the older 4-6-0 type, and hauled loads of 540 instead of only 350 tons. Whereas, prior to their introduction, only upper class passengers and their personal servants could be carried on the mail trains, additional coaches accommodating nearly 500 third class passengers were incorporated in these trains when hauled by "XC" engines. Moreover, the coal consumption a ton-mile was reduced by

25 per cent., and the annual saving due to the use of these engines amounted to some Rs. 5,50,000 or £41,250. At this rate, each of the six engines would appear to have paid for itself within about 18 months of its being placed in service. The "XC's" had, said Sir Andrew, covered 25,000,000 miles in India without an accident, and, though they gave trouble in the early stages, there had never been a derailment, and during the past five years no distortion of any type of track by an engine of this class had been reported. It may also be remembered that the committee called attention to the superior steaming qualities of the "XC" class engines over those of the "XB" black sheep of the flock. The light "XA" engines also appear to have proved comparatively satisfactory in most respects, except in cases where they have had to work over black cotton or other treacherous sub-soils or formations.

* * * *

Lessons of an Indian Accident

The *Bengal-Nagpur Railway Magazine* for October, 1939, gives some particulars of a serious accident on another Indian railway which serve to show how the purpose of the best safety devices can be defeated by carelessness. A non-stopping train was derailed at the facing points of a single line crossing station, some defect in the operating and locking mechanism preventing their being set correctly. The detector, however, functioned properly and prevented the lowering of the home signal. Nevertheless, due, it would seem, to neglect to maintain proper adjustment of the wire run, the home signal lever was pulled right over, so freeing the locking on the outer signal (the home signal very generally releases the outer at Indian Class B stations) which was then lowered; the warner, by that time also free, was then also pulled off. The driver, who seems to have been misled by the presence near the points of the person who had to hand up the written "line clear" form, either did not observe the adverse home signal or decided to ignore it because he had received a through-run indication from the lowered warner, the Indian equivalent (as regards signals ahead of it) of the British distant signal. The stationmaster's action was inexcusable and the accident points to the necessity not only of strict obedience to rules but of very careful maintenance, there being few things more dangerous than ability to reverse a "blind" lever in that way.

* * * *

Sunday Night on the Railway

In present circumstances Sunday night has become for thousands a time of travelling, with what is to many the novelty of a cross-country train journey heightened by the peculiarities of the blackout. Those who in civilian life shuddered at the thought of a journey otherwise than by car, now thankfully patronise the branch line services that enable them to return from a week-end leave to the remote situations whither military duty has called them. The blue-lit carriage lulls the mind like a perambulating opium den, so that no surprise is felt when a private soldier suddenly speaks in the unmistakable accents of one of our older universities. At stations, clusters of glowing cigarette ends gather outside the carriage window, the invisible smokers addressing brief, gruff words of farewell to the bulky silhouettes who anon grope their way within with apologetic murmurs to those whom they bruise with their boots or stun in the process of divesting themselves of their respirators. These may not be the ideal conditions for travel, but the darkened railway carriage is all the same a welcome sanctuary in which to observe our fellow beings temporarily relaxed from the rigidity imposed during daylight hours by the wearing of a uniform.

Eire Railways in 1938

RAILWAY returns recently published by the Eire Government for the year 1938 cover the railways wholly in the Free State and those partly in Eire and partly in Northern Ireland. The only railway operating undertaking lying wholly in Eire is that of the Great Southern Railways Company, with a route mileage owned of 1,929 miles 43 chains, in addition to 120 miles 17 chains leased or worked, including the Irish lines of the Fishguard & Rosslare Railways & Harbours Company, 104 miles, and certain colliery lines. At the end of 1938 the total single track owned including sidings was 2,498 miles 77 chains. Route mileage owned at the end of 1937 was 1,956 miles 2 chains, but this was reduced in the course of 1938 by the closing of the Westport—Achill line of 26 miles 39 chains. For the railways wholly in Eire the financial tables and certain of the statistical returns are based on those given in the Great Southern Railways Company's annual report, but they are supplemented in the Government returns by detailed operating statistics. A similar procedure is adopted with the Great Northern Railway which, according to the return, had in 1938 a route mileage of 224 miles 52 chains of 5 ft. 3 in. gauge line in Eire and of 318 miles 52 chains in Northern Ireland. This shows changes of only a few chains from the lengths in operation in 1937 and 1936, but a reduction of 8 miles 75 chains in Northern Ireland in comparison with 1935 because of the closing of the Armagh—Markethill line.

For the other railways situate in both territories the data are grouped together, and the further operating statistics of these railways are not available. They include the County Donegal Joint Railways 90 miles 71 chains, 3 ft. gauge; Londonderry & Lough Swilly 80 miles 60 chains, 3 ft. gauge; Sligo, Leitrim & Northern Counties 43 miles 21 chains, 5 ft. 3 in. gauge; Dundalk, Newry & Greenore 26 miles 68 chains, 5 ft. 3 in. gauge; and Strabane & Letterkenny 19 miles 17 chains, 3 ft. gauge. Of these railways 52 miles 59 chains of 5 ft. 3 in. line and 184 miles 19 chains of 3 ft. gauge line are in Eire. These mileages show little change since the withdrawal in December, 1935, of the train service on the 18½ mile Buncrana—Carndonagh extension of the Londonderry & Lough Swilly Railway.

Gross railway receipts of the Great Southern Company for 1938 were less than those for 1937 by £35,134 or 1.10 per cent., and £96,073 or 2.94 per cent., below those for 1936. Traffic expenditure on the Great Southern showed an increase of £21,419 or 0.74 per cent. in comparison with 1937, and of £58,934 or 2.06 per cent. in comparison with 1936. On the Great Northern the decrease in railway gross receipts in 1938 was £9,639 or 0.89 per cent. in comparison with 1937, and of £4,962 or 0.46 per cent. in comparison with 1936. In expenses there was an advance of £60,907 or 6.13 per cent. in comparison with 1937, and of £64,880 or 6.56 per cent. in comparison with 1936. In the case of "other railways" in 1938 there were advances in railway gross receipts of £461 over 1937 and of £1,543 over 1936, while there was a progressive decline in expenditure, so that the loss on working in 1938 was £1,145 less than in 1937 and £5,062 less than in 1936. Net receipts of ancillary businesses on the Great Southern were £75,185 in 1938, against £98,152 in 1937, and £67,283 in 1936. The £61,562 profit on road transport was £27,799 lower than for 1937, but £5,422 higher than for 1936. Hotel profits in 1938 were £10,627, against £14,770 in 1937 and £14,024 in 1936. On the Great Northern the profits from ancillary businesses amounted to £12,272 in 1938, compared with £7,493 in 1937 and £18,210 in 1936. These variations were chiefly

	1936			1937			1938		
	Great Southern Railways	Railways partly in Eire		Great Southern Railways	Railways partly in Eire		Great Southern Railways	Railways partly in Eire	
		Great Northern	Other Railways		Great Northern	Other Railways		Great Northern	Other Railways
Passenger journeys ..	8,316,959	5,137,207	569,462	8,005,264	5,116,690	581,312	7,297,923	5,005,581	573,340
Goods, tons ..	2,669,365	758,736	170,313	2,599,754	761,294	171,792	2,348,625	779,381	171,736
Average haul, miles ..	65.35	53.05	—	65.26	53.92	—	68.36	53.39	—
Train-miles ..	9,415,639	3,717,047	747,225	9,360,022	3,844,493	764,574	9,153,595	3,911,810	780,264
Operating ratio, per cent.	87.88	92.18	120.64	90.71	92.21	117.00	92.41	98.80	115.06
Passenger train receipts	1,294,987	558,312	31,732	1,287,074	574,053	31,736	1,286,772	570,877	31,944
Goods train receipts ..	1,943,283	504,417	64,886	1,890,797	492,564	65,530	1,856,800	486,200	66,245
Gross railway receipts ..	3,262,201	1,084,326	101,557	3,201,262	1,089,003	102,639	3,166,128	1,079,364	103,100
Railway expenditure ..	2,857,233	989,518	117,914	2,894,748	993,491	115,079	2,916,167	1,054,398	114,395
Railway net receipts ..	404,968	94,808	Dr. 16,357	306,514	95,512	Dr. 12,440	249,961	24,966	Dr. 11,295

due to road transport which produced £9,694 in 1938, £3,111 in 1937, and £13,345 in 1936. Hotel profits dropped from £4,865 in 1936 to £4,382 in 1937, and to £2,578 in 1938. The accompanying table compares railway traffic figures for the past three years.

On "other railways" the net receipts from road transport amounted to £1,231 in 1938, comparing with £190 in 1937, and £2,871 in 1936. Under the description "petrol, oil, and steam rail motors" the mileage run on the Great Northern Railway increased from 313,156 in 1936 to 338,176 in 1937 and to 451,574 in 1938. On other cross-border railways the corresponding mileages were 374,920 in 1936, 373,186 in 1937, and 393,941 in 1938. The Great Northern now possesses 12 diesel railcars against 7 in 1937, and no longer has the 3 petrol railcars which were at work in 1937. Diesel railcars on "other railways" numbered 9 in 1938 against 6 in 1937. During the year 1938, 977 separate passenger road services were operated in Eire by the railway companies in accordance with licences granted under the Road Transport Act, 1932, of which 689 were by the Great Southern, 270 by the Great Northern, and 18 by the Londonderry & Lough Swilly. Motor passenger vehicles in service in 1938 numbered 326 on the Great Southern and 129 on the Great Northern. Motor vehicles for parcels and goods were 647 on the Great Southern and 104 on the Great Northern.

* * * *

Nationalisation

A NEW film in the "Point of View" series for show at news theatres has just been completed, and deals with the subject of nationalisation in this country. The dialogue consists of the points of view expressed by Mr. Pro and Mr. Con to an impartial chairman, and the result is, in accordance with the design of these films, inconclusive and intended to promote further discussion among members of the public. The illustrations are well chosen, the photography excellent, and the film as a whole well worth seeing by any railwayman; and the general public will also enjoy a picture which shows so attractively various phases of railway operation with which the ordinary travelling public is not familiar. As to the point of controversy, however, we have to confess that the arguments of Messrs. Pro and Con were amateurish. The administration of a railway—or, for that matter, any business—depends upon the policy of the control, and experience demonstrates that there is nothing to choose between well-administered private and State railways. On the other hand, there are examples of ill-administered railways under both types of control. If the policy upon which the administration is based demands, first of all,

the best possible service for the public (which in many countries may also include the public safety in the event of war), and secondly a low operating ratio, the public will duly benefit by convenient and efficient transport. It may be assumed that this policy controls the administration of such railways as those of Holland and Italy, to take random examples from many. On the other hand, if the priority is reversed, and the prime object is a good operating ratio, with the convenience of the public placed second—never mind how close a second—the service provided may well not be so good. It is beside the point to say that in the long run the taxpayer has to make up any deficit in the former case, for that is far from being necessarily so, the alternative generally chosen being an increase in the debt, which is in fact the equivalent of an increase in the capital.

The Folkestone-Dover Line

THE fall of cliff between Abbotsciff and Shakespeare Cliff tunnels on the Southern Railway main line between Folkestone and Dover, which took place during the night of November 28-29, is but one more chapter in the long record of disturbances to the coast in this neighbourhood. Naturally the occurrence of such a fall in the early days of the war recalls the great landslide of December 19, 1915, which resulted in the destruction of part of the then South Eastern & Chatham line between Folkestone and Dover for the remainder of the last war. It appears on examination, however, that the coincidence does not really provide a close parallel, as the present blocking seems to be but a fall of chalk and not a landslide, and should be capable of clearance within a very short time. Parliamentary powers for this section of railway were obtained originally in 1836, and deviations were sanctioned by Acts of 1837 and 1843. The work was carried out by William Cubitt, and the line was opened for traffic on February 7, 1844. In December, 1839—that is, between the passing of the Act and the construction of the railway—there was a slip in Folkestone Warren at about the same time as the great landslide at Lyme Regis. Then in January, 1877, a slip of about 100 acres in extent occurred at the east end of Martello tunnel, and, while the line was closed, the South Eastern Railway arranged a road coach service between Folkestone and Dover for which, incidentally, horses supplied by Thomas Tilling were taken by rail from London. There was a slip in Folkestone Warren in March, 1881; in September, 1885, a fall of chalk from the cliff near Capel Lodge blocked the railway cutting; in January, 1886, the west end of the Warren area was affected for the length of about a mile;

a comparatively slight slip occurred in November, 1892; and in December, 1896, the effects of an extensive slip at the west end of the Warren extended as far as Abbotscliff. The landslide of December, 1915, was the greatest disturbance in this neighbourhood ever recorded either before or after the beginning of the railway era. It had been preceded by a slight slip in one of the cuttings in the Warren a few days earlier, and the railway was not reopened until August 11, 1919. By the Southern Railway Act, 1934, a deviation was authorised, which would leave the existing line at Folkestone Junction and enter a three-and-a-half-mile tunnel just to the north of the west entrance of the Warren tunnel. It would rejoin the existing line about 500 yd. west of the west entrance of the Shakespeare Cliff tunnel. A diagram showing this deviation was published on page 117 of THE RAILWAY GAZETTE of January 19, 1934. An extension of time for the completion of the deviation has since been sanctioned.

and I am emboldened to return to the charge. My complaint was, as he says, of unpunctuality.

Since I wrote, the 7.48 a.m. train from Welwyn Garden City, in which, with perhaps a natural egotism, I am greatly interested, has still pursued its evil courses; and has not been punctual more than once. This morning (Day 1 of the new era) it was 25 min. late at Finsbury Park. On paper the new timetable of the King's Cross—Hitchin service at business times (morning and evening) leaves little ground for criticism and is in some ways better than it was before the war. But what avails it if the trains are always late?

Yours truly,

F. H. MASTERS

The Centenary of "Bradshaw"

London & North Eastern Railway,
Thorpe Station, Norwich

November 27

TO THE EDITOR OF THE RAILWAY GAZETTE

SIR.—With reference to the correspondence relating to the 1840 issue of *Bradshaw's Railway Companion*; the copy in my possession has exactly the same title page as that reproduced in your issue of November 24 except for the name "Charles Tilt, Fleet Street, London" as the retailer of the guide.

Yours faithfully,

H. R. STATHAM,

District Goods and Passenger Manager

Letters to the Editor

(The Editor is not responsible for the opinions of correspondents)

Emergency Services

39, Elmwood, Welwyn Garden City

December 4

TO THE EDITOR OF THE RAILWAY GAZETTE

SIR.—The depression produced by the editorial footnote to my letter in your issue of November 17 has been dispelled by the support received from Colonel P. M. Brooke-Hitching;

PUBLICATIONS RECEIVED

The Railway Handbook, 1939-1940. London: The Railway Publishing Co. Ltd., 33, Tothill Street, S.W.1. 8½ in. × 5½ in. 96 pp. Paper covers. Price 2s. 6d.—"The Railway Handbook" is designed to provide the railway student with a concise collection of useful statistics and other information. The sixth edition, which has just been published, is somewhat later than usual on account of the war. The same sequence has been continued, but all matter has been revised and brought up-to-date with the latest available statistics. The chronology of railway history has been extended to include items of outstanding importance and its topicality may be gauged from the fact that the Railway Executive Committee, appointed by the Minister of Transport to be his agents for controlling the railways, is included. This year the Ministry of Transport is not issuing the usual census of railway employees, but, by courtesy of the Minister, "The Railway Handbook" has been able to publish the figures for the week ended March 11, 1939.

Welded Steel Construction. By Robert S. Hale. London: Sir Isaac Pitman & Sons Ltd., Parker Street, Kingsway, W.C.2. 1939. 9 in. × 6 in. 170 pp. Illustrated. Price 12s. 6d. net.—This book deals with the more practical aspects of structural welding as applied in the U.S.A. It contains chapters on the Principles of Welding, the Design of Welded Joints, Fabrica-

tion, Erection and Testing. Abstracts from the Chicago and New York City Building Code (1938) are reproduced, also tables of permissible loads and standard connections. The chapter on estimating will be of interest, although the prices and figures given are for comparative purposes only and are naturally based on American conditions. The author states that he did not intend to write a thesis on welding art or on the science of construction, but within its scope the book serves a useful purpose. Photographs are reproduced of some of the largest welded steel structures which have so far been constructed by welding.

British Railways To-Day. By K. G. Fenelon. London: Thomas Nelson & Sons Ltd., 35/36, Paternoster Row, E.C.4. 7½ in. × 5 in. 187 pp. Illustrated. Price 2s. 6d. net.—The case of the British railways has of late years been very much before the public, especially since the claim made by the companies for a "square deal." The publication of a new book by a well-known writer on questions of transport is therefore opportune, especially as it is from the pen of an independent critic. Dr. Fenelon prefaces his work with an epitome of the early history of the railways, following this with chapters on the relations of the railways with the State and with the public. The working of the railways is described at some length, permanent way and signalling, rolling stock and operating

being explained in clear non-technical language. A section is devoted to the road-rail question and to the many problems which have arisen out of the development in recent times of transport by road. In his chapter on "Railways and the Trader" the author does scant justice to the successful efforts of the companies to establish contacts with their clients: indeed, other chapters bear witness to the special measures taken by the railways to deal rapidly and efficiently with all classes of traffic. But the book, in which a mass of information has been cleverly condensed into a readable summary, will form a welcome addition to the library of anyone interested in railways. There are some excellent photographic reproductions, an appendix containing statistical data, and an index.

Boring Machines.—The name of Asquith is virtually synonymous with high-class boring and drilling machines covering almost the whole range of construction. Few industries have shown such technical progress in the last two decades as machine-tool building, and from the details illustrated and described in the latest brochure, No. R 74, to hand from Wm. Asquith Limited, of Halifax, an idea may be gained of the high standard of design and precision workmanship which goes into the production of modern horizontal drilling, boring and milling machines. A table useful to shop managers shows the proportions, capacities, power requirements, and weights of seven sizes of machines, and outline drawings and descriptions of each type are included.

THE SCRAP HEAP

The provision of food and other necessities for the 100,000 Germans forcibly transported from the Baltic States has been entrusted to the Travels and Holidays section of the Nazi K.d.F. (Strength Through Joy) organisation.

* * *

WELL READ

It would be unbelievable if it were not officially circulated, this list of the admirable people engaged at public expense by the Chatham House Institute to read the overseas newspapers for the Government. Thus we get four readers of the Russian press, at a total cost of £2,800 a year. What in the name of Joseph Stalin can occupy four people searching all day through the uniform wastes of *Izvestia*, *Pravda*, and other Soviet sheets? There are seven scrutineers of the German press which is hardly more variegated. Scandinavia and the Baltic require eight full-time workers and South-east Europe seven. One of this latter corps is a volunteer. The other six cost £4,060.—From the "Evening Standard."

* * *

B.T.

DAGBOGSBLADE AF STORM P.



Girafferne er nu saa populære, at de anvendes paa mange forskellige Maader.

A suggestion by a popular Danish cartoonist for the employment of some giraffes recently acquired by the Copenhagen Zoo, after several years without a representative of the species.

Mexican railwaymen still honour the memory of engine driver Jesus Garcia, who gave his life to save the town of Nacozari, on November 7, 1907. It was a Sunday afternoon when a fire in a goods train at the station extended to wagons of powder and dynamite. Garcia, although off duty, jumped on an engine, coupled up the wagons and hauled them away along the line. He succeeded in moving them about two kilometres away when the fire reached the explosives and the whole train was destroyed, including the engine and the heroic driver. But many lives were saved and the act of self-abnegation was afterwards commemorated by a permanent memorial.

* * *

The ruins are sixty miles south of Baghdad, and the journey takes three or four hours. The road begins well enough, but soon becomes rough and uneven. I knew we were drawing near when we crossed a single railway track running over the sand, and I saw a notice board bearing, in English and Arabic, the words "Babylon Halt." I have read books which have described the humiliations visited by Time upon what was once the mightiest city in the world, but this notice board translated them into the idiom of our own civilisation. That "the glory of kingdoms, the beauty of the Chaldee's excellency" should be known as a "halt," a place which even local trains pass with a derisive whistle, seemed to me as bitter as anything prophesied by Isaiah.—H. V. Morton in "Through Lands of the Bible."

* * *

Last February Mr. William M. Jeffers, the President of the Union Pacific Railroad, invited 200 freight conductors, brakemen, engineers, station agents and other employees to Omaha to meet with 300 of the line's executives. For two days the rank and file fired away at their bosses. Then the executive had a chance to talk back, either to explain why things could not be done the way the men in overalls suggested, or to say, as most of the bosses did, that they had learned something about railroading they did not know before. After the tell-it-to-the-boss meet-

ing broke up, things began to happen... Jeffers has a way of making everybody on the line feel that he's part of the railroad and be proud of it. He says he is going to keep the rank-and-file men on the traffic survey job, checking up on the management. They will continue to go out after business—for more business means more jobs. "If, in a similar way, you could get every railroad worker in the country to feel that he was a part of the business," Jeffers declares, "it would come near to solving the railroad problem."—Condensed from the "Kiwanis Magazine," in the "Reader's Digest" for September.

* * *

During 1938, exactly 1,465 suggestions were discussed by divisional, regional, and system co-operative committees of the Maintenance of Way Department, Canadian National Railways. Of more than 1,000 new subjects before the committees in 1938, 79 per cent. were suggestions by employees. These covered the improvement of tools, care and distribution of materials, methods of performing work, and working conditions.

* * *

CAUTIONARY TALES FOR RAILWAY PASSENGERS

TALE OF AMBROSE ALGERNON LEROY
(Who wandered irresponsibly, and was lost for ever)

Now Ambrose Algernon Leroy Was not an ill-intentioned boy; In fact, he still might be with us Had he been less adventurous. But when he took a railway ride, He would not stay by Mother's side. He liked to amble off alone And board some train upon his own. Her back was turned for half a minute— A train came in—and he was in it! She lost him thus at Bromley North; They brought him back from Perranporth. He vanished on his way to Wool— Was run to earth at Pontypool. He wandered off at Totteridge And found his way to Bonar Bridge! His father fumed, in deep offence At all the trouble and expense. "Oh Ambrose!" wailed his fond Mamma, "I'm so afraid you'll go too far!" Ill-omened words! Could she have seen, That very day, at Hither Green, As they were waiting for the train, Her son go dawdling off again. Alas! She happens to have been Perusing *Nash's Magazine*. The boy had never seen before, A van like this, with open door. Upon its side a label hung, Indited in an unknown tongue! He clambered in, and groped about; He never heard the shunters shout. The door clanged to—the little man Was locked in a banana van, Returnable, when not in use, From Hither Green to Syracuse. Upon the ferry, all that night, Though to the deck 'twas fastened tight, That van was tossed about, until Poor Ambrose was extremely ill. It rumbled 'midst the Alpine rocks, But no one heard his bangs and knocks. It rolled beneath Italian skies, But no one heard his screams and cries. For years his parents sought for news. They never thought of Syracuse!

C. HAMILTON ELLIS

OVERSEAS RAILWAY AFFAIRS

(From our special correspondents)

NEW SOUTH WALES

Report for the Year ended
June 30, 1939

The results of working for the year ended June 30 last were not so satisfactory as those for the two preceding years when surpluses were shown. Compared with the previous year the results were:—

	Year ended June 30		Increase (+) or decrease (—)
	1938	1939	
Gross earnings	£ 19,486,116	£ 19,146,441	— £ 339,675
Working expenses	13,759,988	14,542,980	+ 782,992
Balance, working profit	5,726,128	4,603,461	— 1,122,667

After providing for statutory obligations in the shape of interest, exchange on interest remitted overseas, loan management expenses and sinking fund charges, there was a shortage in the net earnings of £1,171,522.

The causes which operated to produce this result were entirely beyond the control of the administration. Working expenses rose sharply and, although a considerable portion of the increased expenditure was budgeted for, they exceeded those of the previous year, as shown in the table above, due mainly to unexpected increases in the State and Federal basic wages, award variations, and higher material costs.

The feeling of uncertainty created by the international situation, the prolonged drought which prevailed over a large portion of the State for a considerable period, and the lower receipts from wool and wheat, had a serious effect on all business activities throughout the State. These factors, coupled with the industrial trouble on the coal-fields, resulted in the diminution of earnings.

Defects in Hawkesbury River Bridge

[On page 634 in our issue of November 17 we gave a brief outline of the existing Hawkesbury River bridge and the reasons for the decision to replace it. Our correspondent now sends more detailed information regarding the inspection and temporary repairs to the piers.—Ed., R.G.]

During the year the usual periodical examinations were made, and it was found that cracks, which were known to exist in some of the piers, had extended and that additional cracks had appeared, particularly in No. 4 pier, due to the rollers of the expansion bearings failing to function.

After a detailed examination, it was decided to strap temporarily with wire ropes the masonry of No. 4 pier, and to construct a steel cofferdam for attachment to the caisson foundation so as to enable a reinforced concrete sleeve to

be built up on the concrete foundation around the masonry of the pier. On this sleeve it was intended to erect a steel structure which would lift the ends of the spans and allow the roller bearings to be replaced by suitable segmental expansion bearings. It was also proposed to treat in similar manner each of the other piers.

Faulty Concrete in Caissons

Test holes bored into the concrete with a diamond drill, after the cofferdam had been fixed in position, indicated that faulty materials had been used in the concrete of the caissons carrying the masonry of No. 4 pier, a considerable quantity of blue-coloured silt from the river bed being found amongst the concrete. This was confirmed by sinking a shaft, 4 ft. by 3 ft., 54 ft. deep, in the caisson, the iron casing of which was found to be corroded through in several places allowing salt water to penetrate into the poor quality concrete and cause decomposition. The shaft was filled with concrete, and cement grout was pumped into the material in the caisson as a temporary measure. Upon inspection by a diver of the other five piers, it was ascertained that their iron casings were also badly corroded, and it became apparent that the carrying out of repairs to the substructures was not practicable.

Corrosion in Girderwork

The thorough examination also disclosed that serious pitting had taken place in an important pin in one of the girder trusses, and that this could not be removed and replaced. To insure safe running conditions and reduce the loading on the steel and masonry superstructures, single line working over the bridge was introduced, and the masonry of No. 4 pier was strapped with steel girders. (See illustration on page 740.)

The provision of a new structure is absolutely essential, and its erection must be completed with the utmost speed. These facts have been brought under the notice of the Government by special report.

NEW ZEALAND

New Works in Otago District

In the Otago district of the South Island several important new works are in hand. A sum of £50,000 is to be spent this financial year on the St. Leonards—Sawyer's Bay line doubling near Dunedin, a measure that will benefit both suburban and long-distance services. In addition, £35,000 will be spent this year on other works in progress in various parts of the district, principal among which are the Oamaru foreshore protection works and the Clarendon grade easements. Over £16,000 will be expended on signals and electrical communications, mainly along the Christchurch-Dunedin, Central

Otago, and Wingatui—Middlemarch routes. Other improvements include additional crossing loops and sidings at a large number of stations, extra staff quarters and station remodelling at Milton.

New Locomotives

Two of the "Ka" class semi-streamlined 4-8-4 engines built at the Hutt Valley railway workshops for North Island lines, are now out. They are the first of 35 being completed at the rate of one in six weeks.

[They were briefly described on page 1013 in our issue of June 23 last.—Ed., R.G.]

Two of the 40 "J" class 4-8-2s ordered from the North British Locomotive Co. Ltd. of Glasgow, have already arrived. The "J's" will be allocated to the principal locomotive districts of the North and South Islands, and will work freight and express passenger services as required.

Frankton Junction Improvements

Reference to the proposed plan for a rearrangement of railway facilities at Frankton junction and through Hamilton is contained in the Public Works Department estimates. In it it is stated that £10,000 will be required this year for the rearrangement of the railway services and the lowering of the line, and that the amount required to complete the work will be £668,300.

Although the scheme has not been drawn up complete, it embodies the building of new stations at Frankton junction, and Claudelands, the duplication and lowering of the line through Hamilton, the abolition of the station at Hamilton and the erection of a new low level bridge across the Waikato River. Although plans for the new station at Frankton have not been approved, the Cabinet has approved the site, and already some preliminary work has been done. If the whole scheme is approved, the present railway bridge will be converted into a road bridge.

EIRE

Increase in Sea Rates on English Services

[Our correspondent in Eire calls attention to the new schedule of rates that came into force on November 20 as between English and Irish ports, set forth in detail on page 652 in our issue of November 17, and adds the following notes.—Ed., R.G.]

It is specifically stated that the increases are made in respect of the sea portion of the through transit, and that the whole of the increases in these rates will be apportioned to the sea portion of the journey.

Charges for livestock by passenger services are increased by exactly the same amounts as apply to stock by goods services.

Other Rates Increases

It will be remembered that the Great Southern Railways increased their rates by 5 per cent. on January 1, 1938. Some

of the other Irish railway companies did not increase their local rates, but on account of the present situation notification has been given of increases to apply from November 20. The Great Northern Railway Company has notified an increase of 5 per cent. in passenger fares, also in consequence of the rising costs due to the emergency.

Great Southern Railways Traffic

The traffic on the Great Southern Railways has shown an appreciable increase in recent weeks, but this increase is generally in merchandise traffic. The decrease in passenger traffic is undoubtedly due to unsettled world conditions, and restrictions on petrol do not appear to have resulted, to any extent, in a reversion to rail traffic, as was expected, but perhaps it is yet too early to expect any definite change.

Increase Due to Accumulation of Wartime Stocks of Goods

In the merchandise traffic the increase in ordinary goods train receipts is largely due to traffic resulting from anticipated requirements for the future, as there is no doubt country traders are reverting to the old principle adopted prior to the last great war, by which they kept unusually large stocks of stores on hand, whereas from 1918 onwards they reduced their stocks to the minimum necessary for carrying on business. Increased carryings of livestock are due to a better demand, better prices, and greater production. The increase in the tonnage of coal is probably due to anxiety to have adequate supplies available; the same remarks apply to the increased traffic by road.

The company has been faced with many demands from different sections of the staff for increased wages, and the cost of materials has risen, so that the position remains difficult.

INDIA

Level Crossing Accident

Six passengers in a bus were killed and sixteen injured in a collision between the bus and a train at a level crossing on the Ghaziabad-Saharanpur section of the North Western Railway.

Civil Engineering Research

The Railway Administration Report for 1937-38 records the activities of the civil engineering section of technical research undertaken by the Indian railways.

(1) *Measurement of track stresses due to lateral and vertical forces.*—Experimental work was directed to the measurement of stresses and deflections in track caused by the lateral oscillations of locomotives by means of measuring instruments located both on the track and on the locomotive. A detailed examination of the rail and fishplate stress and deflection records led to the evolution of new formulae for calculating the stresses and deflections due to vertical loads under varying conditions.

(2) *Heat-treated crossings.*—Six sets of crossings subjected to special heat treatment, were laid in the track on the East Indian Railway in order to obtain data from actual experience on the reduction of

wear, if any, on crossings in service that could be secured by the process. The trial sets were still under observation.

(3) *Special arrangement of joint sleepers.*—As a result of investigations, the original arrangement of sleepers at joints was revised, the base being changed from a rectangle to an "H" shape. The new design provides for an increase in the area so as to enable the whole area to be properly packed. This procedure is expected to keep the depression at the joint as nearly as possible the same as at other positions in the rail. The ultimate aim is to secure uniformity of support throughout rails and joints and reduce track maintenance costs. The new arrangement is being tried out on the Assam-Bengal, East Indian, South Indian, and Madras & Southern Mahratta Railways, and promises well.

(4) *Reconditioning of fishplates.*—In conformity with the recommendations of the Indian Railway Enquiry Committee, the Railway Board addressed the different railway administrations to ascertain the progress made in the adoption of reconditioned fishplates as already recommended. Substantial progress is reported.

(5) *Guard rails at level crossings.*—Designs have been prepared using a flat bar as the guard rail bolted to the running rail with cast iron distance blocks between the sleepers. This enables it to be used with a cast iron or steel-sleeper road without any special sleepers or chairs. The scheme is to be subjected to actual trial on the Great Indian Peninsula Railway.

(6) *Rail expansion joints.*—A series of designs for expansion joints has been prepared for use on bridges where rail joints are welded throughout the length of the span or where the rails are rigidly attached to steel sleepers. These are to be placed on trial on the East Indian and Madras & Southern Mahratta Railways.

(7) *Cushioning pads between rails, bridge timbers, and girders.*—Rubber and composition pads between rails and sleepers and between sleepers and girders have been under trial on bridges on the Bombay Baroda & Central Indian and the Great Indian Peninsula Railways and the results have appeared to be satisfactory.

(8) *Effects of welding on structural members under stress.*—Experiments have been carried out to determine the possibilities of welding on structural members already under stress. Further experiments have been found necessary and arrangements have been made for the completion of this series of investigations.

FRANCE

Aid to English Travellers

At a recent informal gathering of British and American journalists in the Champs Elysées office, attended by M. Edouard Jonas, Haut Commissaire au Tourisme, and M. Anatole de Monzie, Minister of Public Works, the writer was informed that the French authorities were taking steps to encourage English travellers to visit France. My informant added that the foreign exchange regulations, restricting the amount of currency that may be taken out of England, at present formed an obstacle to travel. However, he said, negotiations on this and other points were in progress with the English authorities and perhaps something might be done in the matter. Already arrangements had been made to issue French travel permits in London and this would be convenient for

English travellers, rendering it unnecessary for them to make a special stay in Paris for that purpose.

Riviera and Winter Sports Resorts

Efforts are being made to attract French visitors to the Riviera and to organise winter sports in certain resorts. Facilities are likely to be afforded to officers and men of the British forces, when on leave, to take part in organised courses of ski-ing. Ski-funiculars and aerial cableways will be in operation. In all resorts the smaller hotels will be open, but those of the palatial type are likely to remain closed, unless the influx of visitors warrants the requisite expenditure. Arrangements are being made at some of the Riviera resorts to lodge and board soldiers on leave at the low rate of fr. 20 a day. But as a number of the resorts are still in the military zone the final decision in these matters rests with the army authorities.

M. de Monzie, in a letter to the *Eclaireur de Nice*, recently pointed out that even in the mobilisation period a good train service was maintained from Paris to Marseilles and Nice. Since October 2, he stated, one day and two night trains had been kept running in both directions between Paris and Marseilles, doing the journey in 14 hr. One of the night trains, he added, ran on to Mentone and the other to Vintimille. In addition, a train from Lyons to Vintimille did the run daily in 12 hr. Local services between towns on the Riviera made communication as convenient as possible under war conditions. M. de Monzie humorously alluded to the early flight of visitors from the Riviera, the exodus continuing even when he restored the Simplon-Express service on September 7. Monaco, that little paradise of neutrality, also seemed to share the haunting fears.

But apparently there are prospects of increasing travel in France, as further improvements are to be made in the train services to all parts of the country. The additional train services are to be included in the new timetables, to be issued probably on December 1.

Collection of Luggage in Advance

The S.N.C.F. has resumed the collection of travellers' luggage in advance from any address in Paris and the suburbs on notice being given to the departure station or on a telephone call to the central office Laborde 92-00. In addition, the collection of parcels is again in operation at specified offices in Paris.

FRENCH INDO-CHINA

Railway Connection with Siam

Siam and French Indo-China are to be connected for the first time by a railway from Mongkolborey to Aranya. The construction of the line will begin immediately, and is to be completed by next July. The work is undertaken under the terms of an agreement concluded between Indo-China and Siam on the initiative of M. Georges Mandel, French Colonial Minister.

WARTIME PUBLICITY

National and individual importance of publicity through the technical press in war conditions

A BULLETIN on wartime publicity issued by the Technical Advertising Service, of Aldwych House, London, W.C.2, takes occasion to stress the special importance of the technical press in the new conditions. The technical press, which has been officially recognised as a national service by reason of its contribution to the maintenance of home and export trade, will now be consulted for guidance by newcomers to executive positions. Reshuffling of appointments will find many in posts of responsibility at first unfamiliar to them, with those on whose experience they would normally call temporarily inaccessible. Here the technical press will provide the link with knowledge gained in the past. We would also add to the example quoted by the bulletin, that of new persons acquiring purchasing power but unfamiliar with the markets, for whom the advertisements in the technical press will be of special interest.

Government Recognition of Publicity

In emphasising the importance of maintaining goodwill under conditions which make it difficult to maintain all the services of normal times, the bulletin mentions the position of firms wholly or in part diverted from their peace-time activities by Government contracts. Here it is understood that where Government work is performed on a cost plus profit basis, the inclusion of publicity as an item of overhead cost is permitted.

Other inevitable effects of the war which are considered

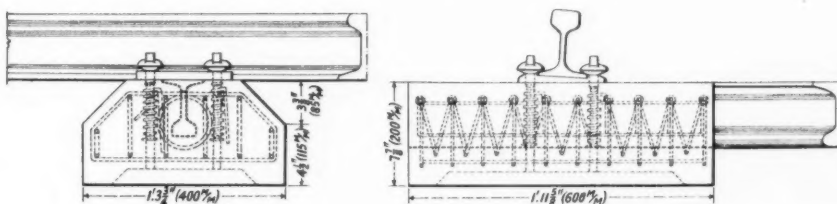
likely to enhance the importance of advertising in the technical press are the reduction of sales staffs by national service, and the restriction of travellers' activities by petrol rationing. At the same time the manufacturer will recognise the importance of keeping up his sales effort, despite difficulties, in order to meet the activities of competitors at home who may be more fortunately placed, and the attack on export trade of neutral countries relatively untrammelled by war conditions.

The conclusions of the bulletin are based on an exhaustive inquiry, in the course of which the technical press itself was canvassed. It was found that almost without exception the trade and technical press were determined to continue publication, care having been taken in most cases to cover all eventualities. The publishers of the bulletin were especially asked by many important journals to say that they are anxious to give every possible assistance to individual firms, both on the editorial side and on the service side where they can often track down information of great value to those confronted with new and difficult conditions. "It will be of real benefit to industry as a whole," the bulletin concludes, "if the technical press is supported as well as possible, especially by those leading advertisers whose example means so much. Any curtailment of publication would involve a serious loss, both in immediate and long term propaganda and in the spread of information that is now more than ever important to industry."

REINFORCED CONCRETE SLEEPERS IN NETHERLAND INDIA

An effective and practical design to replace expensive timber

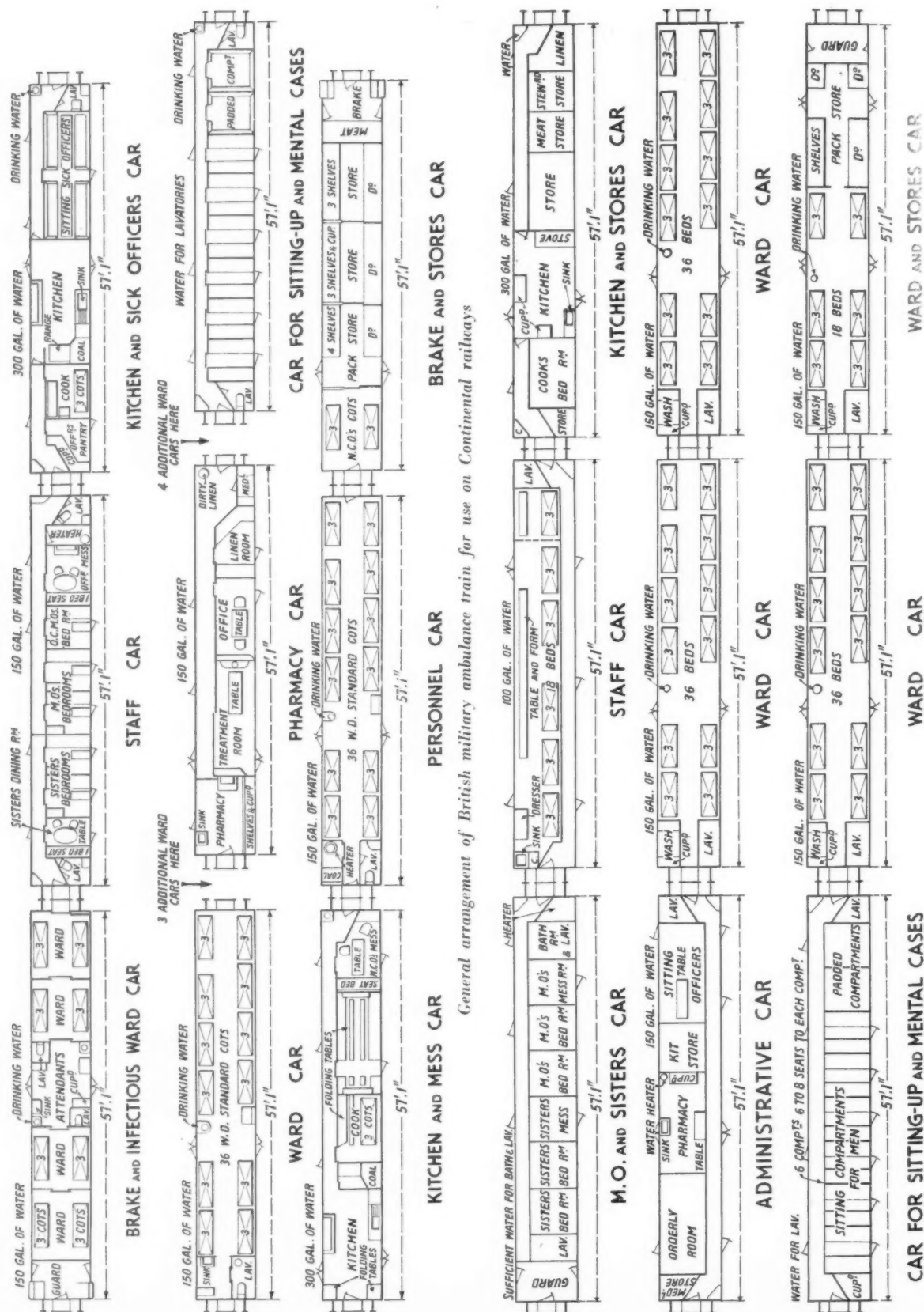
AS briefly recorded in an editorial note in our issue of October 27, page 538, the State Railways in the Netherlands East Indies, impelled thereto by the economic position and high cost of timber, endeavoured a few years ago to make use of old rails as sleepers. This did not give satisfactory results; but a combination of a piece of rail with concrete blocks has done so, after certain difficulties were experienced with the first designs. The accompanying illustration shows the latest design, found very satisfactory after a number of tests, providing a firm and quiet track, securely resting in the road bed. The length of old flat-bottom rail forming the anchoring between the two concrete blocks is placed foot uppermost, and the rail bearing plates are welded to it, coachscrews securing the running rail to the sleeper, working in spring lined holes. A strong heavy wire reinforcement is provided in the blocks and is worked through holes drilled in the old rail piece. Similar sleepers, of varying sizes, have been made for different weights of running rail. A full description of these and the earlier designs, from which the accompanying drawing is taken, appeared in



Cross and longitudinal sections of reinforced concrete sleeper

our contemporary *Spoor- en Tramwegen* for August 5, 1939.

SLAG FOR CONCRETE REINFORCEMENT.—A British Standard for foamed blast furnace slag for concrete reinforcement (B.S. 877) has just been issued by the British Standards Institution. The specification is the first of a series which is in preparation for concrete aggregates generally. It is recommended that concrete made with this aggregate should not be used for outside work without the protection of a rendering. Copies of the specification may be obtained from the British Standards Institution, 28, Victoria Street, S.W.1, price 2s. 2d., post free.



MILITARY AMBULANCE TRAINS

Supplementary details of the trains converted by the British railways, from 57-ft. L.M.S.R. stock, to War Office requirements. For home service there are now available trains of nine vehicles, and for overseas trains of sixteen vehicles

BUT 18 days after the outbreak of war, the four British main-line railways handed over to the military authorities six ambulance trains comprising a total of 82 vehicles of various types. Of these, two trains were for home service, composed of 9 vehicles of 7 types, and four trains were for overseas service composed of 16 vehicles of 9 different types. These were described and illustrated in our issue of November 10, and, by courtesy of the War Office and the Royal Army Medical Corps, we have been allowed to inspect some of these trains and are now able to supplement the details then published, and to reproduce layout diagrams of the two standard forms. When our previous article was being prepared, work was still in progress on the remainder of the total stock required, but by the end of the second week in October all the trains were ready.

As we mentioned in our previous article, the details of design were prepared by the L.M.S.R. on behalf of all the main-line railways, and at the outbreak of war the companies had already agreed upon the types of vehicles they would convert. Actually, the plans were drawn up as long ago as December, 1937. The general difference in procedure from that adopted during the war of 1914-19 was that then the various companies converted complete trains, whereas now individual companies specialised in particular types of vehicle which were subsequently sent to a central point to be marshalled into trains. This procedure minimised the variation and quantity of materials and fittings to be provided at the respective works and facilitated the formation of complete trains within the shortest possible time.

Work upon different types of vehicles was undertaken at seven railway works, namely, Swindon, G.W.R.; Derby and Wolverton, L.M.S.R.; Doncaster and York, L.N.E.R.; and Eastleigh and Lancing, S.R. The L.M.S.R. assumed responsibility for the purchase and manufacture of material, which was forwarded to the different works within a few hours. Further, all the vehicles converted were selected from L.M.S.R. coaching stock, and these were forwarded to the other companies immediately instructions were received from the Railway Executive Committee, to enable work to be put in hand without delay. All the vehicles are 57-ft. long, mounted on four-wheel bogies. Out of the total of 136 vehicles, the L.M.S.R. was allotted the conversion of 47 cars of nine different types, including some embodying a large amount of heavy work, such as kitchen and staff cars. The trains for home service have vacuum brakes, and standard end connections and drawgear, comprising side buffers, screw couplings, and communicating gangway connections. The trains for overseas service are fitted with Westinghouse brakes, and couplings and drawgear of Continental pattern with special type steam connections for use with French locomotives. The L.M.S.R. was responsible for the manufacture of the special drawgear for all the trains. On the overseas vehicles, also, bottom step-boards are fitted to every doorway to give easy access to the cars from the ballast, and holding-down loops and

jacking sockets are fitted to the underside of the frame to enable the cars to be transported overseas on a train ferry.

The exteriors of all cars, both for home and for overseas service, are painted a greenish khaki colour with a white roof. In the middle of the roof is painted a large red cross, and a smaller red cross on a white background is painted in the middle of the body on each side. In this connection it may be mentioned that, under the terms of the Geneva Convention, the use of the red cross is confined to Service casualties, and therefore the civil casualty evacuation trains already described in our columns (October 20 issue, page 521; and November 24, page 676) do not carry the red cross. It may be recalled that, in the war of 1914-19, vessels employed in conveying sick and wounded from overseas to ports in this country (often called "hospital ships") carried the red cross and fulfilled all the conditions applying to hospital ships under the terms of the Geneva Convention and The Hague Convention. They thus met all the requirements laid down as entitling them to complete freedom from attack or interference on the part of the enemy, but Germany showed little inclination to respect this and sunk several of our ships. Eventually in March, 1918, the British Government abandoned running hospital ships flying the red cross flag and re-named these vessels ambulance transports.

Special Signalling for a Sports Event

On the occasion of the annual Army and Navy football game at the municipal stadium in Philadelphia, the Pennsylvania Railroad signal department has to instal temporary double-direction signalling on a section of double line ordinarily used only by goods trains. Both tracks are used for movements towards the stadium before the game and away from it afterwards. While the game is in progress the signals used for facilitating the ingoing traffic are shifted to serve for the reverse movements. Alterations have also to be made in the apparatus in existing signal boxes; additional track-circuit division points and impedance bonds have also to be put down. An account of this special work in our American contemporary *Railway Signaling* for October, 1939, reminds us of some very special signalling work many years ago, in May and June, 1913, in preparation for the fiftieth celebration of the Battle of Gettysburg on July 3. A large traffic was expected, and the Gettysburg and Harrisburg Railroad, a single line 25 miles long, and part of the Philadelphia & Reading system, decided to hire from a then well-known signal manufacturer a complete set of absolute-permissive single-line automatic block signalling for the space of 15 days. There were 45 signals, of the 3-position semaphore type, all functioning correctly on standard circuits, the battery and other accommodation being in temporary housings; 481 trains were safely and quickly handled over the line in the fortnight that the signals remained in service.

THE FINNISH RAILWAYS

A brief historical, financial, and general review of these little-known lines and their equipment

THE first Finnish railway, 67 miles long, running northwards from the capital, Helsinki to Hämeenlinna, was opened in 1862. As Finland was at that time part of the Russian Empire, the gauge adopted for this line was the Russian 5-ft., which is still the standard in Finland. The only variations are five private lines of 2-ft. 6-in. gauge and three of 2-ft. gauge. The develop-

ment of the railways in Finland was slow, and by 1938 the total mileage amounted to 3,550—just under a mile of line for every 1,000 inhabitants in the country.

Goods traffic is mostly seasonal, and special rates are offered to induce as wide a spreadover as possible. Similarly tariff adjustments are made with a view to distributing the traffic more evenly among the various winter ports. Timber is the principal traffic and accounts for about half the total freight carried; industrial goods are responsible for about one-third and agricultural produce for about 10 to 15 per cent. Because of the immense forest resources of the country which are steadily being developed, the timber traffic is constantly on the increase and along with it the traffic in articles of the allied industries—paper and pulp.

Passenger fares are low, the basic third class fare being 28 pennia (100 pennia = 1 Finnmark) a km. (or about $\frac{1}{4}$ d. a mile) with sliding scale reductions according to the distance travelled. The second and first class fares are respectively 50 and 150 per cent. higher, but 90 per cent. of the traffic is third class.

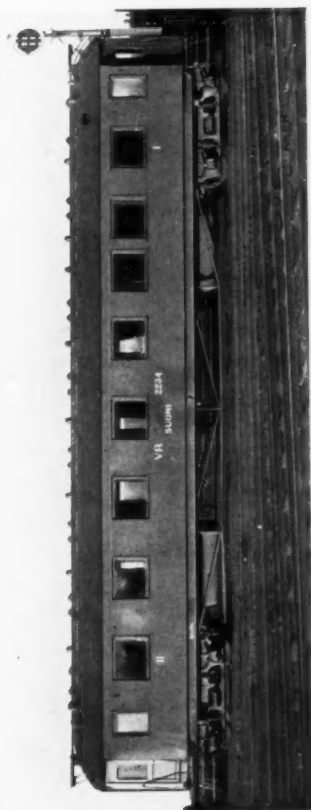
Steam traction is almost universal on the State Railways, and, though the fuel is generally birch logs, coal is used for express and passenger locomotives on the main lines, and for shunting engines. There are 741 locomotives in use at present. Maximum speed is limited to 90 km.p.h. (56 m.p.h.). The principal coal-burning passenger locomotives are the "P1" Pacifics with 6 ft. 3 in. coupled wheels and two cylinders of 23 $\frac{1}{2}$ -in. dia. by 25 $\frac{1}{2}$ -in. stroke. The boiler is pressed to 213 lb. per sq. in., and at 65 per cent. of this pressure a tractive effort of 25,542 lb. is exerted. Representative wood-burning passenger engines are the 4-6-0s of class "H9," also a two-cylinder design but with smaller coupled wheels (5-ft. 9-in. dia.) and a boiler pressure of 171-185 lb. per sq. in. Cylinders measure 20 $\frac{1}{2}$ in. dia. by 23 $\frac{1}{2}$ in. stroke, and the tractive effort at 65 per cent. of the boiler pressure is 15,290 lb.

Diesel railcars have been introduced only recently, and there are about a score of them working on branch lines. The earlier ones have electric transmission, but mechanical transmission is used in the more recent types. The cars have been built in the State Railways workshops but the engines were supplied by Finnish

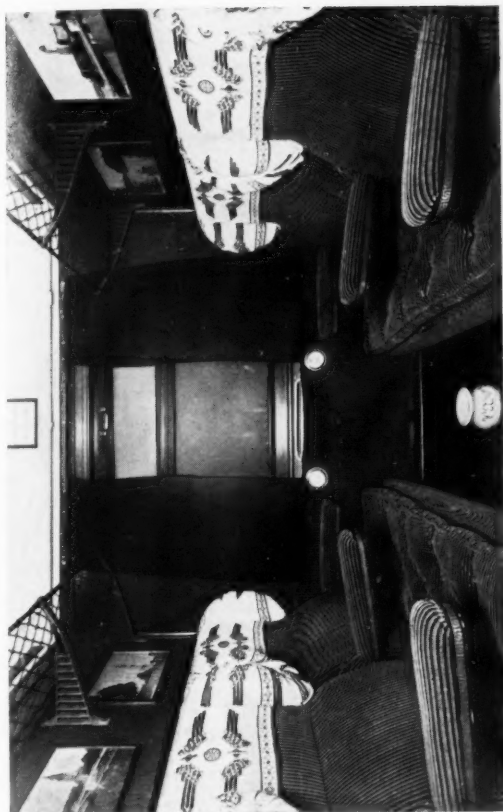


Sketch map showing lines open, under construction, and proposed in Finland

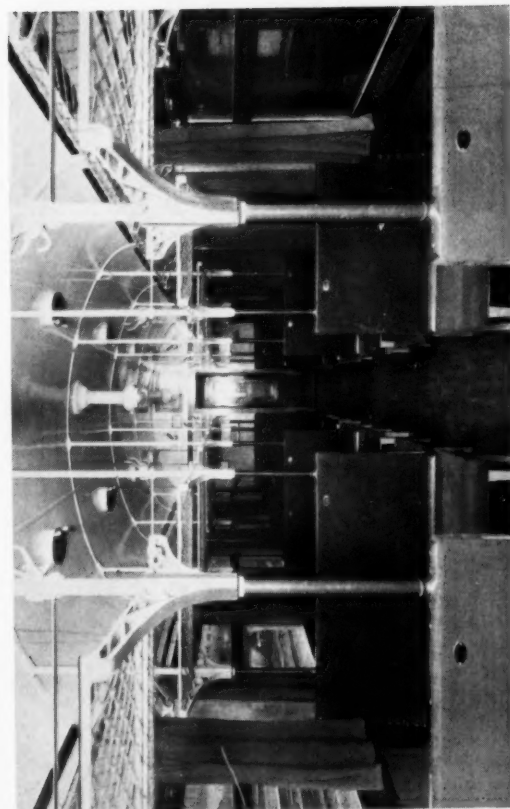
**Modern Rolling Stock,
Finnish State Railways**



First and second class carriage



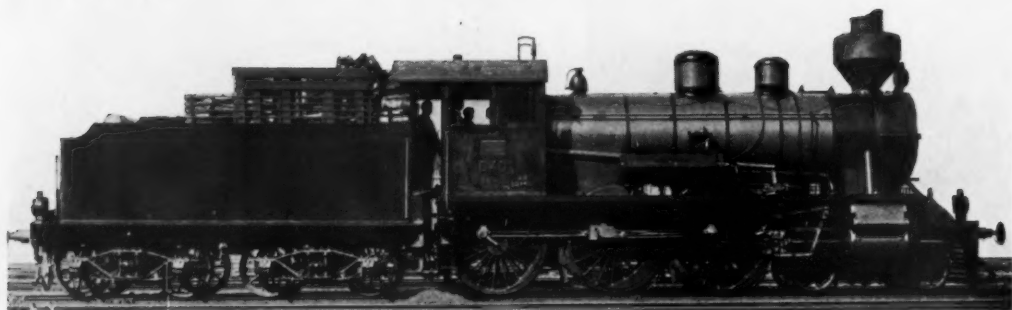
Interior of second class compartment in corridor carriage



Interior of third class corridor coach



Interior of dining car



Class "H 9" 4-6-0 wood-burning passenger locomotive, Finnish State Railways



Above: The terminus of the Finnish State Railways at Helsinki, capital of Finland



Class "P 1" Pacific type coal-burning express locomotive, Finnish State Railways

Right: International railway bridge over the Tornea river linking Haparanda (Sweden) and Tornea (Finland). This bridge, of which one of the spans is normally kept open to river traffic, carries a single mixed-gauge track of 4 ft. 8½ in. and 5 ft.



firms. The engines vary from 90 to 240 h.p. Producer gas cars also are in use.

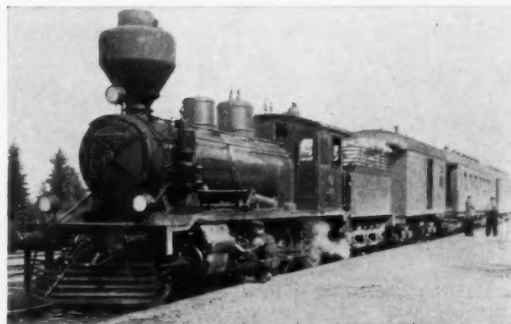
The entire rolling stock is built in the railway workshops, and consists of 1,425 carriages, many of which are bogie vehicles, and 23,731 goods wagons. Practically all the carriage stock and about half of the goods wagons are fitted with Westinghouse air brakes. The carriages are heated either by the Pintschin or Vapor low pressure steam-heating systems. The more up-to-date carriages have water-heating apparatus, and gas lighting is gradually being replaced by electric. On the most important express trains, one turbo-generator supplies current for the complete train, but an emergency accumulator battery is installed in the guard's van.

Some of the restaurant cars are owned and operated by the International Sleeping Car Company, but the sleeping cars are all owned and operated by the State Railways, except on the international route between Helsinki and Leningrad—the journey takes about 12 hr. 45 min.—where they are owned by the International Sleeping Car Company. The only other international connection is with Sweden, but there is a break of gauge at the frontier station of Haparanda.

For through express services, the Finnish State Railways now have a number of modern second and third class coaches, which are exceedingly comfortable, and which, in so far as the shell of the body, underframe, and bogies are concerned, are identical. Below are given the leading dimensions of these types:—

Length over buffers	..	..	68 ft. 2½ in. (20·8 m.).
Max. height above rail	..	..	13 ft. 7 in. (4·155 m.).
Max. overall width	..	..	10 ft. 3 in. (3·14 m.).
Total wheelbase	..	..	56 ft. 2 in. (17·12 m.).
Distance between bogie centres	..	..	48 ft. 11 in. (14·92 m.).
Bogie wheelbase	..	..	7 ft. 2½ in. (2·20 m.).

The second class day coaches, which at present number ten, are of the corridor type with four smoking and three and a coupé non-smoking compartments seating six (and three) passengers. Two of the smoking compartments are



Wood-burning locomotive at a Finnish station

convertible to first class; as first class vehicles they seat four instead of six. There is a door at each end of the corridor, separating it from the vestibule, and one dividing the smoking from the non-smoking compartments. Steam heating and electric lighting are provided. Extensive use of welding in their construction has resulted in these vehicles weighing only 36 tons 18 cwt.

The third class coaches are also vestibuled, but they are of the central gangway open type. Each smoking compartment seats 60, and non-smoking 40 passengers;

there are three seats on one side and two on the other side of the passage way. At one end in each of these coaches, which weigh from 32 tons 10 cwt. to 34 tons 2 cwt., there is an attendant's compartment. Of the 78 of these vehicles now in service, 73 are gas lighted, two electrically, and three are illuminated by both gas and electricity.

There are, in addition, ten second class sleeping cars of the same general dimensions. Each has ten two-berth



Punkaharju, a typical Finnish scene of lake and woodland

compartments; the four middle ones can be converted into two four-berth compartments by opening the communicating doors between them. An attendant's compartment is provided. Steam heating and electric lighting are installed. The weight is substantially that of the second class day coach.

One of the most recent developments on the Finnish railway system is that the Government has decided to undertake the construction of a 310-mile extension from Kemijärvi, the present northern terminus of the line from Kemi—on the Gulf of Bothnia—via Rovaniemi. The new extension, which is estimated to cost 800,000,000 finnmaks, will terminate at the port of Linnahamari on the Gulf of Petsamo, an inlet of the Arctic Ocean. The initial 100 miles from Kemijärvi to Sodankylä will be taken in hand first. This proposed extension is of special topical interest at the moment, as its object is to provide transport facilities for the valuable Petsamo nickel deposits, which, together with the short strip of Arctic coast between Norway and the U.S.S.R., are the object of Soviet attention.

The table shown below gives some of the financial results of the Finnish State Railways during recent years:—

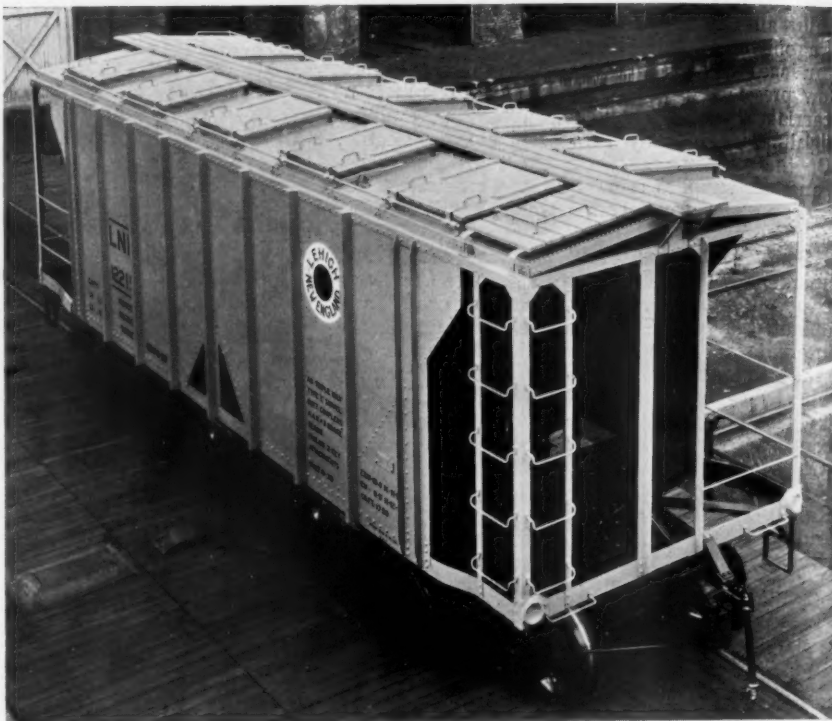
Year	Receipts in million Finnmark			Net Expenditure (Million Finnmark)	Net Revenue (Million Finnmark)
	Passengers	Goods	Total		
1920 ..	135·7	225·1	378·4	—	—
1928 ..	283·6	571·2	891·8	—	—
1932 ..	196·4	444·1	677·1	668·2	8·9
1933 ..	193·8	496·0	725·8	655·0	70·8
1936 ..	241·1	639·9	925·9	754·6	171·3

255 finnmaks = £1.

NEW AMERICAN HOPPER WAGONS FOR CEMENT

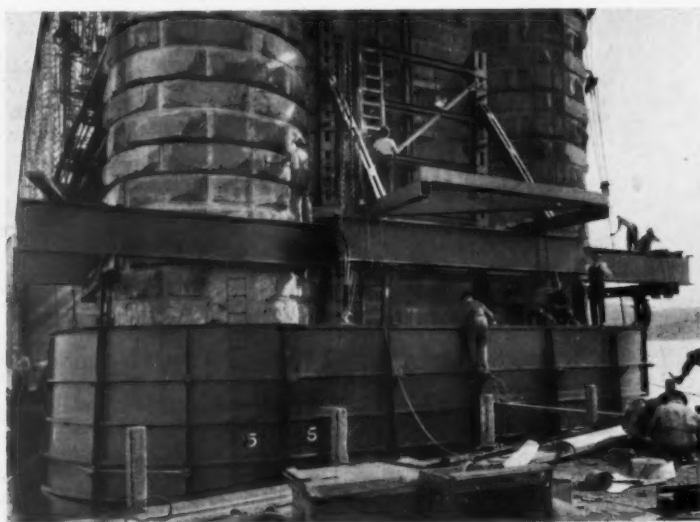
THE Lehigh & New England Railroad has recently taken delivery from the American Car & Foundry Company of 50 additional bulk cement wagons, one of which is shown in the accompanying illustration. This type of vehicle is equally well adapted for the conveyance of other commodities in bulk, such as powdered coal, sand, and lime. Welding has been freely resorted to in their construction and all weld heads in contact with the lading are ground off flush with the plate surface thus avoiding a tendency to slow up or even stop the discharge of the contents of the wagon, as may sometimes be caused by rivet heads or other similar projections.

The vehicles are of the twin hopper type with four sliding-gate-valve outlets and ten watertight hatches for loading. Centre partitioning plates are used at various points in the length of the body portion. The wagons can be loaded to 78 tons and are capable of discharging this load in 22 min. The capacity is 1,790 cu. ft. The inside length of the body portion is 26 ft. 3½ in. and width 9 ft. 8 in.; corresponding outside dimensions are 32 ft. 3½ in. and 10 ft. 4 in. The unloaded weight is slightly over 24 (long) tons. The use of these cars has contributed materially to an increase in the volume of cement



New bulk cement wagon for the Lehigh & New England Railroad

traffic handled by the Lehigh & New England Railroad, and the type is proving especially convenient for contractors using cement on large concrete projects such as bridges and piers.

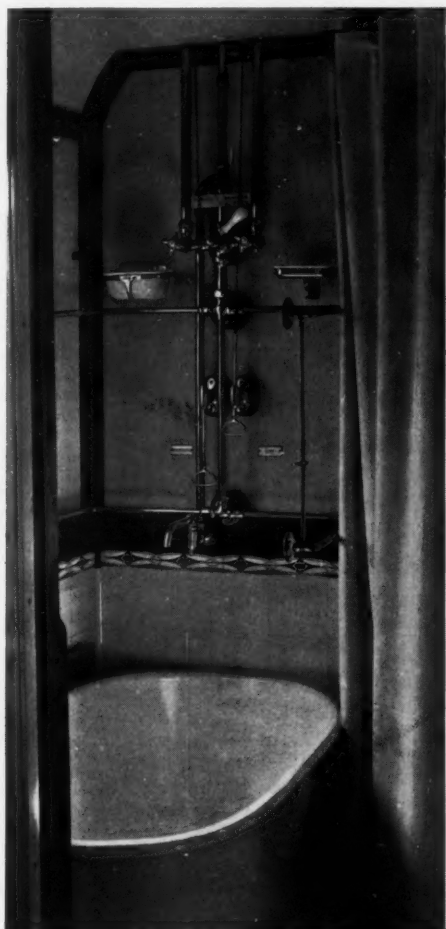


Hawkesbury River bridge, New South Wales (see p. 731), temporary strengthening of No. 4 pier. Left: Cofferdam being placed in position. Right: Steel joist strapping

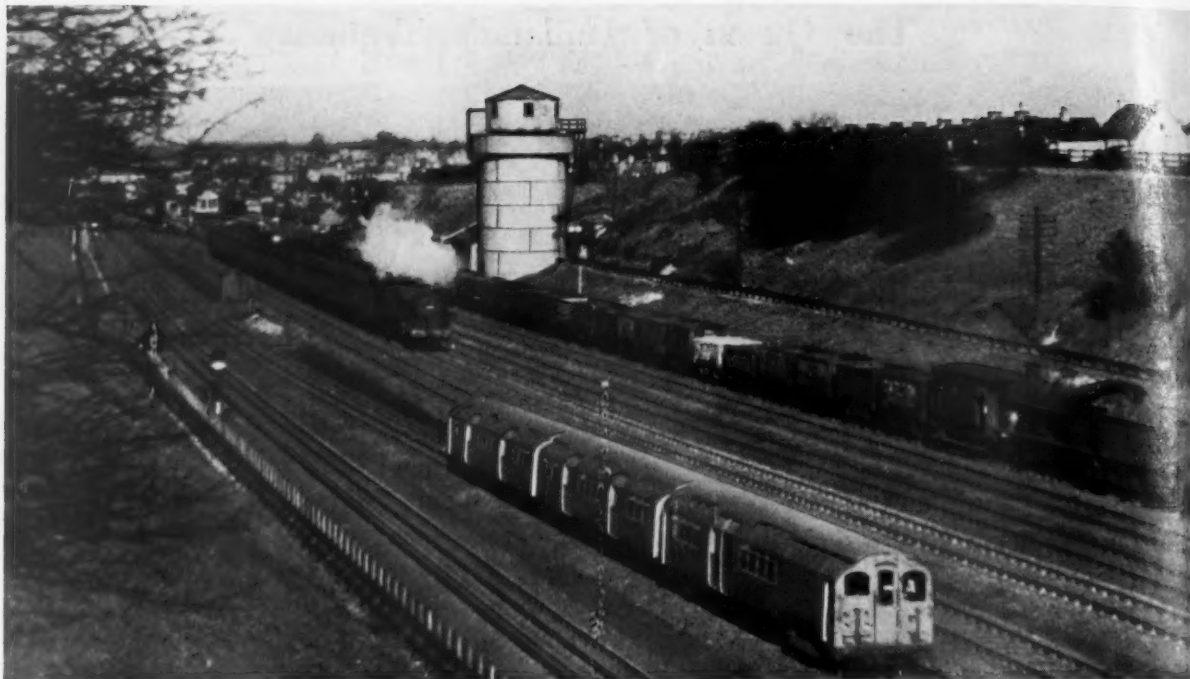
The Queen of Holland's Train



The train in which Queen Wilhelmina makes all her journeys on the Netherlands Railway. In the first coach Princess Juliana has her bedroom. The second contains the bedrooms of the Queen and of Prince Bernhard, the Queen's drawing room, and a compartment for members of the Court. The next coach contains the dining room with two compartments for Members of the Court, and a smoking room. An electric power plant, a compartment for the railway personnel, the kitchen and the commissariat are in the last two coaches. The train is shown headed by one of the Netherlands Railway 4-cylinder simple 4-6-0 express locomotives



Left: A bathroom in the Royal train. Right: The drawing room with the dining car beyond



"Transport on Trial" is the latest issue—the fourth—of the British series of short films, "Points of View." We refer to this film in our editorial on page 728. It is very well photographed and includes some excellent shots of trains and railside scenery of which an example, taken on the L.M.S.R. near Watford, is reproduced above



Preparing for use as an air raid shelter the disused Law tunnel at Dundee. It was opened by the Dundee & Newtyle Railway on December 16, 1831, and has been disused since July, 1861, when a diversion railway was brought into use



View inside the ward coach of a French ambulance train. Points of interest are the blinds for blacking-out; the use of a solid fuel stove for warming; and the arrangement of stretchers supported by springs on brackets

RAILWAY NEWS SECTION

PERSONAL

M. Jean Monnet has been appointed Allied Chairman of the Anglo-French Co-ordinating Committee to which we refer in an editorial note at page 725. M. Monnet represented the French Government on various allied organisations in London during the last war, and particularly on the Inter-Allied Maritime Transport Committee.

Mr. Arthur Purvis has been appointed Chairman of the Anglo-French board which has been formed to effect purchases of armaments and aircraft from Canada and the United States of America under the surveillance of the Anglo-French Co-ordinating Committee. Mr. Purvis, as stated in our editorial on page 725, is a Director of the Canadian Pacific Railway.

Mr. Robert E. Woodruff, who has been Operating Vice-President of the Erie Railroad for the last ten years, was appointed Trustee by the Federal Court on October 18. This appointment has since been confirmed by the Interstate Commerce Commission. Mr. Woodruff succeeds Mr. Charles E. Denney, who was President-Trustee until he became head of the Northern Pacific on October 1.

Mr. David Eccles, who in peacetime is Chairman of the Anglo-Spanish Construction Company (Santander-Mediterranean Railway) and now actually engaged in the Ministry of Economic Warfare, is in Spain with the British Trade Mission to Madrid, of which he is a member. The other members of the mission are Mr. E. Playfair, of the Treasury, and Mr. R. M. Nowell, of the Board of Trade.

M. Ghelmegeanu, formerly Minister of Communications, has been appointed Minister of the Interior in the Roumanian Cabinet.

L.N.E.R. APPOINTMENTS

The following appointments have been approved by the directors:—

Mr. S. L. Baister, Works Manager, locomotive works, Stratford, to be Works Manager, Shildon and Faverdale wagon works, in succession to Mr. W. Wells-Hood, who is retiring in February, 1940.

Mr. A. O. Chilvers, Assistant Locomotive Works Manager, Stratford, to be Works Manager, locomotive works, Stratford, in succession to Mr. Baister.

Mr. Allan S. Quartermaine, M.C., B.Sc., M.Inst.C.E., who has been appointed Chief Engineer, Great Western Railway, is an honours graduate of London University and a Fellow and Chadwick Scholar of University College. After a period of training in the Hertfordshire County Surveyor's Office and at the Tees Side Bridge & Engineering Works, Middlesbrough, he joined the



Photo] **Mr. Allan S. Quartermaine, M.C., B.Sc., M.Inst.C.E.**

Who has been appointed Chief Engineer, Great Western Railway, as from January 1, 1940

Great Western Railway at Wolverhampton in 1910. In 1914 he was transferred to Paddington, and in 1915 went to Egypt with the 116th Company, R.E. During the war he was on location in Sinai, and subsequently became New Works Engineer on the Palestine Military Railways; he was promoted to the rank of Major, mentioned in despatches, and awarded the Military Cross. In 1920 Mr. Quartermaine was appointed Assistant Divisional Engineer at Gloucester, and returned to Paddington in 1924 as Assistant to the Joint Chief Engineers. He acted as Co-ordinating Officer with the War Office in the formation of the Supplementary Reserve Units of the Royal Engineers, and raised and commanded No. 1 Bridging Company (now the 152nd Railway Construction Com-

pany). In 1926 he was appointed Divisional Engineer at Bristol, and in 1929, on Mr. Carpmal's appointment as Chief Engineer, Mr. Quartermaine returned to Paddington as Assistant Chief Engineer (Permanent Way and Docks). Subsequently, in 1933, he became Assistant Chief Engineer, and in 1938 Deputy Chief Engineer.

INSTITUTION OF CIVIL ENGINEERS

Mr. P. C. Dewhurst, Chief Mechanical Engineer, Central Uruguay Railway, and Mr. B. H. Johnson, Rhodesia Railways, have been elected Members.

Mr. Wilfred J. T. Gagnon and Mr. James A. Northey have been reappointed Directors of the Canadian National Railway.

INDIAN RAILWAY STAFF CHANGES

Mr. J. H. Bavin, Chief Auditor, A.-B.R., returned from leave and resumed his duties on October 25.

Mr. A. E. W. Jervis, Chief Auditor and Accountant, M. & S.M.R., returned from leave and resumed his duties on October 23.

We regret to record the death, on November 19, of Mr. H. J. May, O.B.E., J.P., of the International Co-operative Union, who, as the member nominated by the railway trade unions, has taken part in the enquiries held by the Railway Staff National Tribunal since its formation. Mr. May had previously taken part, as a representative of the users of railways, in the proceedings of the National Wages Board for Railways.

We regret to record the death at the age of 73 of the Hon. William Caldwell Hill, who was the Australian Minister for Works and Railways, 1924-28.

Mr. Maxwell Scott Moore, of Londonderry, has left estate in England and Northern Ireland valued at £7,204. Mr. Moore was up to the time of his death Director of the Great Northern Railway (Ireland), County Donegal Railways Joint Committee, and the Strabane & Letterkenny Railway.

Sir William Clare Lees, Managing Director of the Bleachers' Association, and Mr. Angus D. Campbell, Director of Waring & Gillow Limited, have been elected Directors of the Manchester Ship Canal Company.

The directors of the San Paulo (Brazilian) Railway Co. Ltd. announce

that the Rt. Hon. Lord Balfour of Burleigh has been elected a director of the company to fill the vacancy on the board caused by the death of Brigadier-General the Hon. Arthur Melland Asquith, D.S.O.

We regret to record the death, on November 12, of Mr. F. Colin York, who was for 33 years Chief Mechanical Engineer of the Buenos Ayres & Pacific Railway. Mr. Colin York was born on March 30, 1860, and was educated at



The late Mr. F. Colin York

Locomotive Superintendent and Chief Mechanical Engineer, Buenos Ayres & Pacific Railway, 1882-1916

Repton. He served his apprenticeship in the G.W.R. shops at Swindon, and in 1882 went to Iquique, Chile, to work for the Chilean Government on the construction of the Longitudinal Railway. On the completion of this, he worked on the construction of the Buenos Ayres & Pacific Railway, and when the line between Buenos Aires and Junin was finished, he took charge of the locomotive and carriage and wagon section under Mr. Collett, who was then responsible for all engineering matters. Soon afterwards it was decided to make Junin the repair centre for the railway and Mr. York was confirmed in his appointment of Locomotive Superintendent, in which capacity he served for 33 years, during which period the title was changed to Chief Mechanical Engineer. Such length of service as this must constitute something like a world record, which is all the more remarkable in that Mr. Colin York actually helped to build the railway he served so faithfully. He was responsible for the specifications of 660 locomotives purchased by the company during his term of office, and for all the carriages and wagons which entered service during this period. The most successful of his locomotives were the "1251" class 4-6-0, which worked the passenger service between Junin and Retiro for nearly 20 years; the "140" class 2-8-0, which worked on goods service all over the system; and also the "1500" class 4-6-0, the first of which

was exhibited at the Centenary Exhibition, 1910, and were the first superheated engines to go out to Argentina from England. They worked the passenger trains for years over the heavily-graded lines west of Justo Daract. To establish the nucleus of the works and traction personnel, Mr. Colin York brought out many British foremen, drivers and firemen, and later on also engaged a number of draughtsmen from England. Both Mr. Colin York and his wife took a keen interest in the welfare of this British Colony as well as in an Italian Colony in the locality, and received many tokens of appreciation for services rendered.

We regret to record the death on November 3 of Mr. Henry Tripp, in his 78th year. Mr. Tripp, at the time of his retirement in 1922, was Assistant to the London District Traffic Superintendent of the London & North Western Railway.

We regret to record the death at the age of 95 years of Mr. Michael Lelew, who was one time Southern District Goods Manager of the L.B.S.C.R.

We regret to record the death at the age of 70 in Montevideo, of Mr. Percy Sedgfield, who in 1929 retired from the position of Locomotive Superintendent of the Central Uruguay Railway.

Mr. Percy Syder, an account of whose career and retirement we gave in our last week's issue, was presented by his staff with a roll top desk, and a set of silver and enamel brushes for Mrs. Syder. In making the presentation, Mr. A. G. Croxall, Assistant London

City Manager, L.N.E.R., referred to Mr. Syder's successful railway career and his wide interests in other spheres. Graceful tributes were also paid to Mrs. Syder who has so ably supported her husband in his many activities. In acknowledging the gifts Mr. Syder thanked his staff for their loyal support and valuable assistance.

A presentation of a cocktail cabinet to Mr. Percy Syder was made on December 4 at the conclusion of the Metropolitan Conference of Railway Companies. Mr. H. J. Hoskins, London District Goods Manager, G.W.R., made the presentation on behalf of the conference, of which he is Chairman, and of the Associated Lighterage Agents.

We regret to record the death on December 4, of Sir Edwin Forsyth Stockton. Sir Edwin, who was 66 years of age, was from 1923 to 1933 a Director of the London Midland & Scottish Railway. He was a Director for some years also of the Lancashire & Yorkshire Railway and, at the time of his death, a Director of the Manchester Ship Canal.

Mr. C. R. Peacock, whose death we announced in our issue of August 18, has left estate valued at £5,185 (net personalty £5,121). Mr. Peacock was, at the time of his death, Assistant Mineral Manager of the L.N.E.R.

Mr. J. Johnstone has been appointed Factor, Scottish Area, L.N.E.R., in succession to Mr. J. Hay, who retired on October 9.



Two photographs taken last summer at the New York World's Fair. On the left, Mr. C. E. R. Sherrington is seen in the cab of a Canadian National locomotive with Mr. Coleman, who was in charge of the railroad exhibits. On the right, besides Mr. Coleman and Mr. Sherrington, Mr. Fitzgerald, Vice-Chairman of the Committee on Public Relations, Eastern Railroads, is the the right-hand figure in the group. These pictures were taken by Mr. George Le Boutillier, Vice-President, New York Zone, Pennsylvania Railroad

Mr. C. W. Elliff has been appointed a Director of the following railway-associated bus companies in place of Mr. J. C. Chambers who has resigned: Aldershot & District Traction Co. Ltd., East Kent Road Car Co. Ltd., Hants & Dorset Motor Services Limited, Maidstone & District Motor Services Limited, Southdown Motor Services Limited, Southern Vectis Omnibus Co. Ltd., Thames Valley Traction Co. Ltd., and Wilts & Dorset Motor Services Limited. Mr. Chambers has resigned his seat on the board of all these bus companies, and, as recorded last week, of the Devon General Omnibus & Touring Co. Ltd. (in all of which he represented the Southern Railway), as he is on Active Service as an officer attached to an Anti-Aircraft Unit.

Mr. F. B. Simpson, President of the Railway Clerks' Association, 1932-7, whose death we recorded in our issue of October 6, left intestate estate of £2,946 (net personalty £1,692).

INSTITUTE OF TRANSPORT

The following elections were made at a recent meeting of the Council of the institute:—

Members

Mr. H. A. Clarke, Staff Assistant to General Manager, G.W.R. Major L. F. S. Dawes, M.B.E., Secretary, Southern Railway. Mr. A. E. Edwards, Senior Assistant Divisional Superintendent (Western), Southern Railway. Mr. H. K. Koregaokar, Executive Engineer, Eastern Bengal Railway. Mr. W. M. McGregor, Controller of Stores, Eastern Bengal Railway. Mr. J. B. Phillips, Operating Manager (Scotland), L.M.S.R. Mr. R. M. T. Richards, Assistant Traffic Manager, Southern Railway. Mr. N. S. Sen, Divisional Transportation Superintendent, Great Indian Peninsula Railway. Mr. S. W. Smart, Assistant to Superintendent of Operation for Train Services, Southern Railway. Mr. T. B. Stewart, Traffic Superintendent, Buenos Ayres Great Southern and Western Railways. Mr. L. E. Vining, Deputy Chief Operating Superintendent, East Indian Railway. Mr. W. Yeaman, Commercial Manager (Scotland), L.M.S.R. Mr. W. C. Leslie-Carter, Traffic Manager and Deputy General Manager, Carter, Paterson & Co. Ltd. Mr. R. I. H. Longman, Director and Secretary, Wilts & Dorset Motor Services Limited.

Associate-Members

Messrs. G. W. Allsop (G.W.R.); L. T. Axford (G.W.R.); A. J. Broughton (L.M.S.R.); H. C. Burnett (N.S.W.G.R.); J. Campbell (B.A.P.R.); W. M. Clark (S.A.R.); S. A. Fitch (S.R.); H. R. Gunawardhana (Ceylon Government Rly.); D. Kerr (L.P.T.B.); G. de P. Leeper (B.B. & C.I.R.); W. H. Mallett (L.P.T.B.); F. A. Railton (K. & U.R.); M. C. Rothery (N.S.W.G.R.); H. J. Shailes (E.I.R.); C. Singh (K. & U.R.); E. V. Williams (S.A.R.); W. G. Worchurst (N.S.W.G.R.); G. W. Battensby (Northern General Transport Co. Ltd.).

R.C.H. CONFERENCES

Mr. F. R. Potter, Superintendent of the Line, G.W.R., has been re-elected Chairman of the Coaching Traffic Superintendents' Conference for 1940.

Mr. A. E. Sewell, Goods Manager, Scottish Area, L.N.E.R., has been re-elected Chairman of the Goods Managers' Conference for 1940.

Messrs. J. N. Derbyshire and E. J. Fox, Directors of the Stanton Ironworks Co. Ltd., have joined the board of Stewarts and Lloyds Limited.

Mr. James Hodgson, whose death we recorded in our issue of November 10,

left estate valued at £8,904 (net £8,806). Mr. Hodgson was a pioneer of bus transport in Lancashire and at the time of his death was a Director of Ribble Motor Services Limited and Wright Bros. (Burnley) Ltd.

Mr. Alan P. Good has been appointed Chairman of Darwins Limited in succession to Mr. H. L. Armstrong who has resigned in order to devote himself principally to interests in South Wales.

Mr. William Humble has joined the board of Central Wagon Co. Ltd. and its subsidiaries.

STAFF AND LABOUR MATTERS

Railway Wages

The National Union of Railwaymen have now submitted to the Railway Executive Committee a claim for an all-round increase of 10s. a week in wages. The claim has been made to meet the increased cost of living. The union is also concerned about Decision No. 6 of the Railway Staff National Tribunal which, as we go to press, has not been accepted by all the parties. The National Union of Railwaymen claimed a 50s. minimum wage and, as announced in our issue of October 27, there were two findings by the tribunal on the claim. The majority finding recommended a minimum of 50s. in London, 48s. in the industrial areas, and 47s. in rural areas; while the minority report recommended 48s., 46s. 6d., and 45s., respectively. Both reports recommended for women 38s. in London, 36s. 6d. in industrial areas, and 35s. in rural areas.

In a statement issued on December 1, the National Union of Railwaymen said there was considerable dissatisfaction with the position. "The award was not unanimous on the National Union of Railwaymen's claim for a minimum wage of 50s. a week, but the majority finding recommended minima of 47s., 48s., and 50s. for rural areas, industrial areas, and London, respectively. This finding the National Union of Railwaymen accepted at a delegate conference on November 9, and the representatives of the companies were immediately informed." The union's statement proceeds: "It is, of course, optional on parties to the proceedings before the Railway Staff National Tribunal to accept or reject the findings, and in that event for either party concerned to take whatever steps appear appropriate to enforce a satisfactory decision. The lapse of time since the hearing of the claim and the decision is considered to have been sufficiently long to enable a definite conclusion to be reached. The position has been made more serious because there are now the war circumstances to consider. The rise in prices has been such as to call for some increase in pay to meet the position, and a further claim has had to be

submitted to meet the war circumstances. That claim has now been presented to the Railway Executive Committee, and it has become obvious that steps to secure an early settlement must be taken. It is averred in some quarters that the cost of living index figure determines the increases in pay to railway grades. While there is a sliding scale in operation, this only covers certain grades. There is no uniformity in respect of grades throughout the service. Apart from this, the view is held that the figures published in the *Ministry of Labour Gazette* do not adequately express the situation in regard to the cost of living."

Civil Engineering Construction Wages

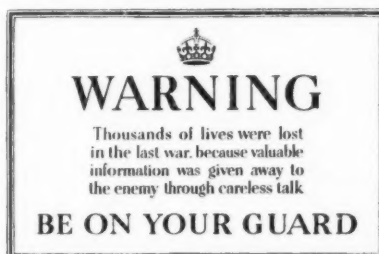
The joint conciliation board for the civil engineering construction industry at a meeting in London on Monday, December 4, agreed, as a war emergency, that the wages of workpeople in the industry shall be increased by a half-penny an hour as from the second pay week this month. It was also agreed that wages should be reviewed next month and then at four-monthly intervals for the purpose of adjusting them in accordance with the cost of living. About 300,000 men engaged on road construction and other public works, will be affected by the agreement.

Forthcoming Events

- Dec. 11 (Mon.).—Institute of Transport (London), at Charing Cross Hotel, W.C.2, 2.30 p.m. Annual General Meeting.
- Dec. 12 (Tues.).—Institution of Automobile Engineers, at Inst. of Electrical Engineers, Savoy Place, London, W.C.2, 6 p.m. "The use of Gas as a fuel for Motor Vehicles," by Dr. J. Clarke.
- Dec. 14 (Thurs.).—Diesel Engine Users' Association, at Caxton Hall, Caxton Street, London, S.W.1, 2.30 p.m. "Overseas Operation of Diesel Engines," by Mr. H. Hopkins.
- Institution of Locomotive Engineers (London), at Waldorf Hotel, Aldwych, W.C.2, 12.30 for 1 p.m., Luncheon. 2.30 p.m., Presidential Address by Mr. O. V. S. Bulleid.
- Dec. 16 (Sat.).—Permanent Way Institution (Manchester-Liverpool), at Board Room, L.M.S.R. Offices, Hunt's Bank, Manchester, 3 p.m. Election of Officers for 1940.

at 7.25 and 10.20 a.m., 1.15, 4, and 5.45 p.m.; times range from 4 hr. 25 min. to 4 hr. 47 min., and the 10.20 a.m. down is speeded up by 50 min. In the up direction the trains provided from Leeds are at 7.50 and 10.15 a.m., 12 noon, 12.55, 3, and 4.45 p.m., taking 4 hr. 20 min. to 5 hr. Most of these trains have through portions restored between King's Cross and Bradford, and through coaches for Hull are run on the 1.15 p.m. down and a special Hull dining car express at 5.55 p.m. From Hull to King's Cross there is a corresponding restaurant car train at 9.45 a.m. In addition, the London-Sheffield service is greatly improved by connections at Retford, off

These anti-gossip warnings are being posted in L.N.E.R. trains, waiting rooms, and refreshment rooms



the 7.25 a.m., 4 p.m., and 5.45 p.m. down; fast up services are given from Sheffield at 8.10 and 10.45 a.m. and 5.20 p.m., the best time (10.45 a.m. up) being 3 hr. 50 min., or 37 min. quicker than any previous connection. There are also better services between King's Cross, Boston, and Grimsby, and the cross-country service *via* March and Lincoln is restored, with two through services in each direction daily between Colchester and York. One of these trains carries a buffet car, and one buffet car service is restored between King's Cross and Grimsby. In the North Eastern Area the Leeds-Glasgow service, with restaurant car, is accelerated 54 min., leaving Leeds at 8.45 a.m. and reaching Glasgow at 3.5 p.m. (the overall time is only 22 min. longer than the normal winter timing); return is at 4 p.m., reaching Leeds at 10.45 p.m., whereas the last previous departure of the day from Glasgow to stations south of Newcastle was at 11 a.m.

Practically the entire normal express service is working between York and Newcastle, all trains having either

restaurant cars or buffet - restaurant cars. Buffet cars are also restored to the Newcastle-Middlesbrough hourly trains, of which the full service, with one or two exceptions, is now running, and to certain trains between Newcastle and Carlisle. The morning through Liverpool to Newcastle express is diverted from Leeds *via* Harrogate, but runs from there *via* Darlington instead of West Hartlepool and Sunderland. In Scotland there has been considerable amplification of the Edinburgh-Glasgow service, hourly trains, with one or two gaps in slack hours, having been restored, while tim-

ings from 63 min. down to the even hour are common. Elsewhere on the system, however, the restoration of service has been on a more limited scale. The day trains over the Great Central main line between Marylebone and Sheffield are still confined to two, of a semi-fast description, the 10 a.m. and 3.40 p.m. (late 5 p.m.) down, and the 9.45 a.m. and 3.50 p.m. (late 5 p.m.) from Manchester to Marylebone, taking about 5½ hr. for the journey; a fairly ample service is provided, however, between Sheffield and Manchester. On the Great Eastern Section the 3.40 p.m. express from Liverpool Street to Ipswich, Norwich, Yarmouth, and Lowestoft, the 6.20 and 7.30 p.m. semi-fasts to Ipswich and the 8.45 p.m. to Harwich have been added to the emergency service, with corresponding up trains, but the acceleration of emergency timings has been negligibly small. Other improvements to services on main lines and branches all over the L.N.E.R. system are too numerous to mention.

S.R. January Improvements

The Southern Railway announces that from January 1 the 10.35 a.m. from Waterloo to the West of England will leave at 10.50 a.m., but will reach Exeter at 2.28 p.m. as now; similarly the 2.35 p.m. will leave at 2.50 p.m. and pick up its existing times at Sidmouth Junction. The expresses due in Waterloo from the West of England at 11.33 a.m., 2.35 and 6.38 p.m. will all arrive 10 min. earlier. A new restaurant car train, restoring the previous midday service over this route, will leave Waterloo at 12.50 p.m. for Salisbury and the West of England, reaching Exeter at 4.46 p.m., and Plymouth North Road at 6.42 p.m.; this will attach at Salisbury a through portion from Brighton and Portsmouth. In the reverse direction, the 10.10 a.m. from Plymouth Friary and 10.19 a.m. from Plymouth North Road to Brighton and Portsmouth will be restored, and connecting with this at Exeter the 10.25 a.m. from Ilfracombe to Exeter will be extended (leaving at 12.50 p.m.) to Waterloo, arriving at 5.13 p.m.; this also will be a restaurant car train. There will be in all four restaurant car services in each direction daily between Waterloo and Exeter, and five between Waterloo and Bournemouth. On the latter route the 1.35 p.m. from Weymouth (2.40 p.m. from Bournemouth Central) will reach Waterloo at 4.55 p.m., an acceleration of 15 min., and only 5 mins. slower than its normal journey time; the 10.20 a.m. from Bournemouth West will arrive at Waterloo at 12.55 p.m., 12 min. earlier, and certain other expresses will be speeded up by 5 min. New week-end services will be run at 2.30 p.m. on Fridays and Saturdays from Waterloo to Winchester, Southampton, and Bournemouth; and at 8.20 a.m. on Mondays only and 6.5 p.m. on Fridays only from Bournemouth West to Waterloo, with useful connections from Weymouth. On the Central Section expresses will be run at 4 p.m. from Victoria to Brighton and at 1.25 p.m. from Brighton to Victoria. Various additional suburban and branch trains will be run. On Monday, November 27, the 1.15 p.m. from Charing Cross to Folkestone, Dover, Deal, and Ramsgate was restored, and with it the 7.35 a.m. from Margate (9.5 a.m. Folkestone) to Charing Cross.

Cheap Fare Visits to Reception Areas

Sunday last, December 3, was the first day on which special cheap facilities were provided by the railway companies for the benefit of relatives and friends visiting evacuees. The total number of vouchers issued for the trains running on that day was approximately 4,500. For one train alone 1,494 vouchers were issued, and this train, the 8.30 a.m. from Waterloo to Devon, ran in four sections. As many as 567 vouchers were issued for one destination.

Christmas Travel Plans

The main-line railways are preparing to run hundreds of extra trains during the Christmas and New Year holiday periods. Many trains will be run in duplicate and triplicate when necessary, and more than 500 fully lighted trains will be employed on the main-line services over Christmas. The railway plans for Christmas also include more than 200 restaurant cars for the service of meals *en route*, and both first and third class sleepers will be attached to night trains running between London and Scotland, Tyneside, Manchester and Liverpool, Plymouth and the West of England. Many seaside resorts are preparing to entertain visitors as usual this Christmas, and special trains will be run to these places.



MONTHLY RETURN

AND

CHEAP DAY RETURN TICKETS

STILL ISSUED FROM THIS STATION

Cheap Day Tickets TO London are available by trains leaving the departure station after 10.0 a.m. On the return journey FROM London the tickets do not permit the holders to travel on trains departing between the hours of 4.0 p.m. and 7.0 p.m. on Mondays to Fridays inclusive

November, 1939

L.N.E.R. poster advertising cheap return fares. The availability of cheap day tickets has since been extended

The railways are arranging for freight depots to be closed for one day from 6 a.m. December 25 to 6 a.m. December 26, except for handling the most urgent traffics. As many railwaymen as possible will be given a few hours leave on Christmas Day. Commercial travellers are to have their usual railway facilities at Christmas. The National Union of Commercial Travellers has been informed by the Railway Clearing House that weekend tickets for commercial travellers issued on Friday, Saturday, and Sunday, December 22, 23, and 24, will be available for return on any day up to and including Wednesday, January 3.

Availability of Cheap Day Tickets

Beginning on Monday last, December 4, the period during which cheap day tickets to London are not available for the

Forces are to be given a Christmas parcel consisting of a Christmas pudding and a pair of socks, accompanied by greetings from Lord Ashfield and their fellow employees. Soldiers serving abroad will receive 100 cigarettes as well. The number of staff at present with the Armed Forces is more than 7,500. The puddings are being made in the kitchens of London Transport canteens, and already more than 1,000 women—members of the staff and the wives and friends of the male staff—have begun knitting the socks. These Christmas gifts are the first activity of the London Transport War Comforts Fund Association. The association, of which Lady Ashfield is President, is asking all members of the staff to make a contribution of 1d. a week. The association will also seek to help widows and dependants of London Transport staff in need because of the war, and will interest

A TRAFFIC NOTICE

A TRAFFIC NOTICE

OPENING

FRIDAY NOVEMBER 17

KINGS CROSS

FRIDAY NOVEMBER 24

CLAPHAM COMMON
OXFORD CIRCUS
OVAL

THE FOLLOWING WILL OPEN LATER

ARSENAL	CHARING CROSS	OLD STREET
BALHAM	CHANCERY LANE	TRINITY ROAD
BANK	GREEN PARK	WATERLOO
BOND STREET	HYDE PARK CORNER	
CHANCERY LANE	KNIGHTSBRIDGE	
	MAIDA VALE	

OPEN AGAIN

CLAPHAM COMMON
KINGS CROSS
MARBLE ARCH
OVAL

OXFORD CIRCUS
TOTTENHAM COURT RD

OPENING

FRIDAY DECEMBER 1

KNIGHTSBRIDGE
GREEN PARK
ARSENAL

FRIDAY DECEMBER 8

HYDE PARK CORNER
BOND STREET
OLD STREET

THE FOLLOWING WILL OPEN LATER

BALHAM	CHARING CROSS	WATERLOO
BANK	CHANCERY LANE	
BOND STREET	GREEN PARK	
CHANCERY LANE	HYDE PARK CORNER	
	KNIGHTSBRIDGE	
	MAIDA VALE	
	TRINITY ROAD	



LONDON TRANSPORT

LONDON TRANSPORT

Three of the London Transport poster announcements of the re-opening of tube stations. The type of poster is being kept uniform, but the lists of stations change almost from day to day with the rapid progress that is being made in completing protective works

return journey was reduced by an hour. Heretofore these tickets could not be used in the rush hours between 4 and 7 p.m. on Mondays to Fridays, but since Monday last they have been available except between 4.30 p.m. and 6.30 p.m. This concession is based on the experience of the loading of trains, which has now been examined fully, and the restricted period in the interests of the heavily loaded business trains is thus reduced from 3 hours to 2 hours. It is pointed out that this change should be of great benefit to those carrying out their Christmas shopping in London.

Reopening London Tube Stations

On Friday last, December 1, the Knightsbridge, Green Park, and Arsenal tube stations were reopened, as scheduled. Bond Street was opened on Wednesday (December 6), two days before the date announced. At Tottenham Court Road, one of the first two stations to be reopened, a new interchange subway, 70 yd. long, has been built to enable passengers to change from the Northern to the Central Line much more easily and quickly than formerly. The floodproof doors fitted at the stations being reopened weigh about 2 tons each, and are capable of resisting a pressure of 140 tons. Special efforts are being made to reopen the closed stations before the Christmas shopping season, and it is expected that all, with the exception of Maida Vale, will be in use by then. This remark, of course, excepts the City section of the Northern Line, which is closed *sine die*.

London Transport War Comforts Fund

All London Transport employees serving with the Armed

itself in any children of the staff who might otherwise go short of the things that they need for their well-being.

Reading Light in London Underground Trains

After many experiments during the past 10 weeks in conjunction with the Home Office, the Ministry of Transport, and the Air Ministry, the London Passenger Transport Board has perfected a system by which reading light will be provided in its trains at all times except during air raids. An experimental car has been examined by the Home Secretary (Sir John Anderson) and his experts. Production of the necessary material will begin immediately, and the first trains fitted with the new system will be placed in service as quickly as possible. A considerable amount of electrical wiring will be necessary. Trains will have three lighting circuits: (1) full peacetime lighting for use in the tunnels; (2) the new reading lamps for use in open sections; and (3) the present Osgilim lamps, for use during air raids. The first two circuits will be controlled by the guard. There will be three or four reading lamps in every car, according to the length of the passenger compartment. These will consist of 15-watt lamps in the middle of the ceiling shrouded by troughs which direct lights on to the seats, but cut it off before it reaches the windows. Compartment stock will also be provided with reading lights. The problems of finding a satisfactory lighting system for London Transport trains has been peculiarly difficult owing to the fact that the sliding doors, which form part of the roof on the tube cars, allow light to escape upwards to the sky when the doors are opened at stations.

Wartime Traffic Trends

The suspension on the outbreak of war of the weekly traffic tables removed the main regular indication of traffic trends, but broad tendencies are outlined from time to time in the railway staff magazines, and in public statements of railway officers. The current issue of the *L.N.E.R. Magazine* remarks that at home the state of trade is fairly constant; heavy industries are working at full stretch; and current L.N.E.R. carryings of merchandise are up by 30 per cent. or therabouts upon 1938. The tonnage of landsale coal has also increased by 20 per cent. over last year's figures, but shipment coal is down by at least 10 per cent. The decline in the export of coal tells heavily upon the company's dock receipts and the convoy system has also diverted some ships from East Coast ports. The net effect of all these changes is to give the L.N.E.R. of recent weeks a better goods and mineral traffic than it carried in 1938. But last year was a wretched one and it is more gratifying that week by week the company's freight statistics have been approaching the level of 1937; they remain well below the standard of 1929, generally voted to be a good year, though no dividend was paid on over thirty millions of L.N.E.R. stock. The fall in passenger bookings of 32 per cent. during the last seven weeks is due mainly to curtailment of services. The December *G.W.R. Magazine* says that between September 1 and November 19 coaching traffic receipts declined by 2 per cent. compared with the corresponding period of last year, but merchandise and "other mineral" traffic increased by 47 per cent., and coal receipts by 36 per cent., due to greatly increased carryings of inland coal, shipment coal having fallen by 10 per cent. Revenue from merchandise and mineral traffic is inflated by the inclusion of hire charges on privately-owned wagons requisitioned by the Government. Although coal exports at the company's docks have decreased, the total revenue at the docks has increased by approximately 27 per cent., due to a larger tonnage of higher rated traffic being dealt with. The curtailment of ordinary passenger services has resulted in a substantial reduction in train mileage, and although large numbers of special troop and other trains have been provided, the total coaching mileage declined by 24 per cent., while the freight train mileage increased by 16 per cent.

Running Trains During Air Raids

In response to enquiries which have reached us from time to time as to the intentions of the British railways regarding the maintenance of train services during an air raid, we are now able to state that instructions have been issued to the staffs of the main-line railways that, immediately an air raid warning has been given, all trains are to be stopped at the first signal box or passenger station so that the engine drivers and guards can be advised. After passenger trains have stopped at a station platform, passengers will be warned that an air raid is imminent, but that the train is to proceed at greatly reduced speed and that they have the option of continuing their journeys or of alighting and dispersing. The drivers of trains, as soon as they are advised of an air raid warning, will place one headlight in the middle of the locomotive buffer beam and remove the other headlights as an indication that they have been warned. When the all-clear message is received the trains will be stopped again and the train staff advised accordingly, and normal working will be resumed as soon as possible. Railwaymen normally keep a sharp look-out for any damage or obstructions, and will naturally do so with especial care in the event of an air raid. Should trains or tracks be damaged, the arrangements devised for the working of railways in such circumstances will be put into operation. Many railwaymen are, of course, fully qualified in ambulance work and also in A.R.P. duties.

Uniforms Banned in Eire

A curious situation has arisen over the question of the neutrality of Eire now that the Government of that country has decreed that no one may wear a uniform other than the Eire defence forces and members of the Diplomatic Corps. There are thousands of Eireann citizens in the British Forces, and during the last three months many of them have been seen in Dublin, for example, not only wearing British Service uniforms but also carrying gas masks, a thing unknown in

Eire. For obvious reasons the Government has decided to prohibit the wearing of uniforms, and although the prohibition is reasonable enough, the real hardships likely to ensue cannot fail to be seen. Men in His Majesty's Forces are compelled to wear their uniform when on leave. Will the British Government waive the rule and permit these men to wear mufti, or is it likely that, as an ingenious writer in a London daily suggests, the railway companies will set up depots at all the British ports embarking men to Eire where civilian clothes may be donned and uniforms left behind in safety. British soldiers travelling from Belfast to Eire during last weekend were warned of the ban before they left Northern Ireland and changed their uniform in the train. Others proceeding to Enniskillen, Co. Fermanagh, had to negotiate the famous "loop" which is in Eireann territory. It is reported that these men solved the question by borrowing civilian overcoats, taking off their caps, and placing their feet well out of the way under the seats while the train passed through the loop. Men intending to travel from England to Northern Ireland *via* Dublin were advised instead to go by Heysham or Liverpool direct to Belfast.

Locomotives for Overseas War Service

As we have already recorded, numbers of G.W.R. "2301" class 0-6-0 locomotives of the late Mr. W. Dean's design have been allocated for war service overseas. Certain of these have been released direct from Swindon works and others have undergone repairs at the Eastleigh works of the Southern Railway.

Some engines also did service abroad during the war of 1914-1919. The engines are now painted black and lettered W.D.

Darlington Bank Top Canteen

A canteen for Servicemen that has not so far been mentioned in these columns is the one being run by the Darlington Women's Voluntary Services, which was opened by the Mayoress, Mrs. J. Dougill, at Darlington Bank Top station, L.N.E.R., on October 20. Major-General W. N. Herbert thanked the members of the Women's Voluntary Service for their work. The L.N.E.R. and the military authorities were thanked by Mrs. C. R. Glover, canteen officer, for the help they had given.

North Sea Shipping

The "short continental trades" are of special concern to the L.N.E.R., with its large interests in steamships based on Harwich, Grimsby, and Hull. On the outbreak of war the Harwich services came to a full stop. Once or twice a smart Dutch motor boat has landed cargo at Parkeston Quay, and there are still hopes that contact with Belgian ports will be maintained by two of the L.N.E.R. company's own cargo vessels. The Hull & Netherlands Steamship Co. Ltd has managed to keep its flag flying and boats managed by Associated Humber Lines hold the sea in spite of war risks. Before the war, large quantities of vegetables and fruit came to England *via* the train ferries to Harwich. Harwich is now officially closed to ordinary traffic. The cross-Channel service between Belgium and England was suspended on Sunday, November 19, owing to the large number of mines off the Belgian coast, but was resumed on the next day. The board of the Zeeland Steamship Company decided on November 20 to suspend regular service between Flushing and Tilbury until further notice. The last ship left Tilbury on the morning of November 22.

Air Services

On November 23 Scottish Airways Limited resumed its passenger air service between Inverness and Shetland (Sumburgh airport) *via* Wick and Kirkwall. This service, which is maintained twice weekly, is additional to the daily Inverness-Wick-Kirkwall service. An Order under the Defence Regulations, which became operative on December 1, and was signed by the Secretary of State for War, declares the Counties of Orkney and Zetland a Protected Area. The effect of this Order is that no persons, other than Servicemen on duty and local residents, are allowed to remain in or enter the area without a permit. Permits are granted for entry by way of certain prescribed sea and air ports only. On November 23 the Finnish Ministry of Communications

sanctioned an increase of frequency to twice weekly of the air service between Scotland and Helsinki. In view of the invasion of Finland by Russia on November 30, the matter is in abeyance, and the existing weekly British air service between Scotland and Scandinavia is now running only to Stavanger and Stockholm.

The German Railways and the War

The German railways are under strict military control, with the management and operation carried out by the Reichsbahn staff under close military supervision from liaison officers in headquarters and stations, and all lines are guarded by military units. During the first days of the war ordinary traffic was brought to a standstill on all main lines. Passenger and goods traffic was resumed after a few days, and on September 7 a restricted timetable was brought into service which has been increased to the service outlined at page 684 of our November 24 issue. There is a considerable shortage of goods stock for other than military traffic. A general blackout is observed, blinds are drawn at nightfall, and trains illuminated by small-power blue lights. Station platforms and goods yards are dark, but waiting and refreshment rooms are well lit.

Ration tickets are necessary for practically every kind of food supplied in refreshment rooms and dining cars, and the railway chiefs are rather proud of the elaborate system of changing ordinary food tickets into very small units of bread, meat, fat and other tickets, of many sizes and colours, required for the purchase of a sandwich or other small item of food, which has been entrusted to the booking clerks. Passengers' experiences are varied, some find their journey going to schedule, others strike an unlucky day, miss all possible connections, and spend several times the scheduled time on their trip. The Germans are known as efficient organisers, and as long as all goes according to schedule, all is well, but once a hitch occurs somewhere, no time is lost in making a thorough muddle of things.

One of the first through trains to be restarted was the Orient Express from Berlin to the Balkans, about the middle of September. The services in the East were drastically restricted until well into the second half of October. Withstanding the German onslaught in perfect order till the day of the Russian invasion, the Poles managed to destroy every bridge, long stretches of track, practically all points and crossings, and the entire signalling, telephone, and telegraph, systems during their retreat. The Germans showed great annoyance at this. They had prepared, in peacetime, construction trains equipped with standard spans for temporary bridge structures, points, crossings, signalling equipment, and so forth, and coaches in every train for feeding and sleeping the staff. Even so they have succeeded in restoring to limited traffic only a few of the main lines in Polish territory up to the time of writing, states a neutral correspondent. The Danzig lines were brought under the Königsberg Division, the Polish lines divided between the old Reichsbahn division at Oppeln, and a newly created division at Poznan, now called Posen. The headquarters of the military and Reichsbahn railway staff in Poland has been established in the Polish Ministry of Communications in Warsaw. Through traffic to East Prussia ceased on the outbreak of hostilities. From October 2 a train service to Königsberg was run *via* Danzig, and passengers ferried across the Vistula at Dirschau; the entire Berlin—Königsberg journey took 12½ hr. There was one train daily each way, often run in two or three portions. On October 28 a temporary bridge across the Vistula was ready and from that day three trains each way were run to Königsberg, one of which runs through to Memel; the fastest times are Berlin—Königsberg is 9 hr. 25 min., and to Memel 13 hr. 8 min. It is stated that the Germans employed 4,000 men, working in relays day and night for 45 days to build the temporary bridge in steelwork across the Vistula at Dirschau alongside the ruins of the one destroyed by the Poles. No attempt was at first made to deal with the debris alongside. The temporary bridge rests on timber supports, and the space between the rails is filled in so that ordinary road vehicles can be taken over the bridge if necessary. A start is reported to have been made with trying to clear away the ruins of the former structure, and it is expected that by Christmas the piers will be ready for a new double-track

structure. For the operation of the Polish lines about 5,000 Reichsbahn staff were transferred, supplemented by 5,000 labour corps members, and another 5,000 Polish railwaymen.

Improved French Train Services

From December 1 some substantial improvements have been made in the French emergency train services, which were reviewed in the November 24 issue. On twenty days in every month a fast boat train is being run between Paris and Calais, connecting with the Calais-Folkestone steamers, and allowed only 195 min. for the 184.4 miles. Two more night expresses have been added to the service over the main line of the South Eastern Region to Bordeaux—a sleeping car train at 7.50 from Paris (Austerlitz), reaching Bordeaux at 4.8 a.m., and Hendaye at 8.2 a.m., and another express at 8.40 p.m., reaching Bordeaux at 5.27 a.m., with corresponding return night trains to Paris. The night service between Paris and the Spanish frontier at Cerbère, *via* Toulouse, has been accelerated 30 min. Despite the heavy demands made by the war on the main line of the Eastern Region between Paris and Nancy, it has been found possible to put on an additional express from Paris at 5.40 p.m., reaching Nancy at 10.47 p.m., and continuing to Saverne; in the reverse direction departure from Nancy is at 3.54 p.m., and Paris is reached at 9.30 p.m. On the Western Region the 8.15 a.m., 1.5, 6.0, and 9.5 p.m. expresses from Paris (Montparnasse) to Rennes, electrically hauled to Le Mans, have been accelerated 23, 17, 15, and 30 min. respectively, with similar accelerations in the up direction. Numbers of railcar services have been restored in different parts of the country.

The Netherlands Railways

Owing to recent attempts to smuggle Dutch uniforms, including railway uniforms, into neighbouring countries, the management of the Netherlands Railways has decided to issue to every member of the staff, from the highest to the lowest, an identity card, bearing the photograph of the holder and required to be signed by him. The cards are to be issued as rapidly as possible. Every railwayman will then have the right—and it will be his duty in every case where there appears the least reason for mistrust—to request any unknown individual wearing a Netherlands Railways uniform to produce his identity card. When Germany invaded Poland there were numbers of Polish railway wagons on the Netherlands Railways. The German Government subsequently demanded from the Netherlands Government the handing over of these wagons, but in the meantime the Netherlands Railways had negotiated with the Polish Government for the lease of the wagons for the duration of the war, and they are therefore now being used by the Netherlands Railways for their own purposes.

Indian Railways and the War

The immediate effect of the outbreak of war in Europe has been an abnormal rise in the prices of all materials, despite the Government's efforts to control them. The arrival of goods from Europe and America has also been subject to considerable delay. These and other reasons have compelled the railways to adopt an immediate policy of economy and retrenchment. One of the first fruits of this policy has been the withdrawal of any passenger trains that could be taken off without undue inconvenience to passengers. The East Indian Railway has cancelled 24 local and branch line trains from November 1, but other trains have had either their timings altered or additional stops inserted in their schedules to minimise the inconvenience that otherwise would have been caused. On this railway, and also on the B.B. & C.I.R., it is believed that the savings effected by the withdrawal of non-essential trains may enable the administration to run a few additional pleasure trains to cater for the certain amount of increased travel in India that the curtailment of voyages to Europe will undoubtedly encourage.

Regarding the article on the South Indian Railway (p. 46) in our Overseas Number, a sentence which reads: "Podanur is also being extended to Coimbatore," should have read: "The metre-gauge line from Podanur is also being extended to Coimbatore."

Questions in Parliament

Illumination of Station Names

Sir Percy Harris (Bethnal Green, S.W.—Lib.), on November 22, asked the Minister of Transport whether he could do something to make more distinguishable the names of stations on suburban lines during the blackout; and whether he would suggest to the London transport authority the painting of the names in luminous paint.

Captain Euan Wallace: The Railway Executive Committee is considering what means can be taken, consistent with the lighting restrictions, to improve the illumination of station names. I am advised that luminous paint would not afford a satisfactory solution of the problem.

Sir P. Harris: Would the Minister consider the suggestion that the transport board and the other railways should in the meantime employ more men on the stations to call out the names of the stations?

Captain Wallace: That is a new suggestion and I will certainly draw the attention of the board to it.

Mr. W. Thorne (Plaistow—Lab.): Is the Minister aware that on some of the District Railways there are small gas jets which are not more than about three-candle power?

There was no reply.

Christmas and New Year Facilities

Mr. George Strauss (Lambeth, N.—Lab.), on November 22, asked the Minister of Transport, in view of the anxiety of very many parents to visit their evacuated children at Christmas time, and that no special trains would be run for this purpose on December 24 or 31, whether the special facilities would be available on some other convenient day.

Captain Euan Wallace: The hon. member will appreciate that other demands upon the railways, including the conveyance of personnel of the Fighting Services proceeding on leave and returning to duty, are likely to be abnormally heavy about Christmastide and the new year, and I should not feel justified in providing the special facilities which he suggests at that time. So far as Sunday, December 24, is concerned, the Government feels that those in the receiving areas, and especially those who are looking after or organising festivities for evacuated children, ought not to be burdened with additional visitors at Christmas time. The same applies to New Year's Eve, particularly in Scotland. It is hoped that the services to be provided on the three Sundays preceding Christmas Eve will cover most of the London reception areas which are not already served by cheap facilities and to which a return journey can be made in one day. The special services will be resumed at the beginning of the new year.

Ladies' Accommodation on L.N.E.R.

Colonel H. W. Burton (Sudbury—U.), on November 23, asked the Minister of

Transport whether, in view of the large number of persons who now crowd into partially lighted carriages at Liverpool Street, he would arrange for a greater proportion of the accommodation to be retained for ladies only.

Captain Euan Wallace (Minister of Transport): I am advised that up to the present the railway company has had no reason to suppose that the number of compartments reserved for ladies is insufficient. I have drawn their attention to my hon. and gallant friend's suggestion.

London-Scotland Railway Service

Mr. H. P. Mitchell (Brentford and Chiswick—C.) on November 30 asked the Minister of Transport, whether, notwithstanding the great difficulties under which the railways were at present working, he would endeavour to improve the speed of passenger services between London and Scotland and important industrial centres, respectively.

Captain Euan Wallace (Minister of Transport): I am glad to inform my hon. friend that arrangements have been made to introduce, as from Monday, December 4, accelerated passenger services and to augment the number of long distance express trains between London, important provincial centres in the Midlands, and the North, and Scotland. There will be a reduction in the journey time between London and Edinburgh of nearly 1½ hr., and proportionate reductions between other towns; there will also be mid-day services between Glasgow, Edinburgh, and London, and a day service between London and Aberdeen. Improvements will be made in Sunday as well as week-day services.

Railway Warrants

Mr. W. Dobbie (Rotherham—Lab.) asked the Secretary of State for War whether, in view of the fact that the railways had now been taken under the control of the Government, he would consult with the Ministry of Transport as to the possibility of giving a free railway warrant to soldiers on leave at least once in three months?

Mr. Leslie Hore-Belisha (Secretary of State for War) wrote in reply: As I informed the hon. member, troops at home will be given free railway warrants for travelling on leave twice a year, including embarkation leave. The fact that the railways are now under Government control does not relieve public funds of the cost of such travelling.

Cheap Day Railway Tickets

Sir Harold Webbe (Abbey—C.) on November 30 asked the Minister of Transport, whether he had now been able to give further consideration to the possibility of reducing the period during which cheap day shopping tickets were not available for the return journey.

Captain Euan Wallace: I am glad to say that the Railway Executive Committee has now found it possible to relax the restriction upon the hours during which cheap day tickets to

London are available for return journeys. As from Monday next, December 4, these cheap day tickets will be available on Mondays to Fridays for return by any train except between the hours of 4.30 p.m. and 6.30 p.m.

Contracts and Tenders

The Department of Overseas Trade has removed from Old Queen Street, and is now located at New Public Offices, Great George Street, London, S.W.1. The telephone number is Whitehall 9040 as heretofore.

Cowans, Sheldon Limited, of Carlisle, is building, to separate orders, three 70-ft. turntables for the L.M.S.R. These turntables are fitted with the maker's vacuum power apparatus, and about 100 turntables on the L.M.S.R. are now so equipped.

Laidlaw, Drew & Co. Ltd., of Edinburgh, has received an order from the Fayoum Light Railways, Cairo, for two sets of oil-firing equipment for Energie-type locomotives.

The Norwegian State Railways have distributed an order for 140,000 tons of steam coal among Tyneside colliery interests.

Rolling stock to the value of £700,000 bought by the Chilean State Railways from Germany before the beginning of the war is to be allowed a safe passage. A specially-chartered steamer will take the material to Chile.

The Egyptian State Railways have recently placed the following orders:—

Thos. Bolton & Sons Ltd.: Copper bars (No. 6.371—£340).

Dorman, Long & Co. Ltd.: Rolled steel joists (No. 301.G.8/164—£464).

British Insulated Cables Limited: 250 tons of copper line wire (330.G.3/18—£13,974 f.o.b.).

W. T. Henley's Telegraph Works Co. Ltd.: 880 km. of lead and cotton covered enamelled cable (335.G.3/2—£5,552 f.o.b.); also 800 km. to Ref. No. 330.G.3/19—£4,700 f.o.b.

The New Zealand Public Works Department is calling for tenders, by January 9, 1940, for a number of machine tools, including a universal radial drill, emery grinder, power-driven screwing machine, and hollow spindle lathe. (D.O.T. Ref. No. T.29121/39.)

German firms, headed by Krupp and Thyssen, are understood to have given notice that they will be unable to carry out the contracts to furnish Argentina with 66 locomotives, 900 goods wagons, and other railway equipment, which were signed prior to the war. Payment in kind, on the direct barter system, was to be made in wheat and wool. It is believed that, before this cancellation, wheat to the value of 4,600,000 pesos had been shipped to Germany and paid for with German credits.

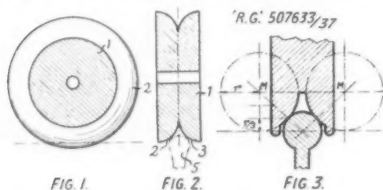
Henry Berry & Co. Ltd., of Leeds, has closed its London office at Abbey House, and all communications should now be sent to the Croydon Works, Hunslet, Leeds.

ABSTRACTS OF RECENT PATENTS*

No. 507,633. Rails and Wheels

Robert Zimmermann, of 209, Rackerstrasse Zürich, Switzerland, and Josef Vonderach, of 118, Limmatstrasse, Zurich, Switzerland. (Application date: December 16, 1937.)

A rolling contact device for vehicles, sliding doors, &c., comprises one or more wheels 1, each of which bears a load and simultaneously acts as a guide, and the tread surfaces 2, 3 of each of which are directed away from each other towards

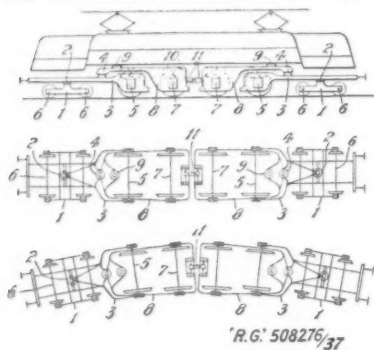


the circumference of the wheel and curve away in section from the rail head 5. It is stated that wedging or jamming does not occur provided that the conditions shown in Fig. 3 are fulfilled, i.e., the distance from the contact points to the line *M-M* is at least $\frac{1}{3}r$. Preferably the wheels are of harder material than the rails. Other modifications are also described.—(Accepted June 16, 1939.)

No. 508,276. Locomotives

Maschinenfabrik Oerlikon, of Oerlikon, near Zurich, Switzerland. (Convention date: November 1, 1937.)

A locomotive has guiding wheels on two sub-bogies 1, each having two axles 6, and driving wheels on four driving axles 5 and 7 of end motor bogies 3 and intermediate motor bogies



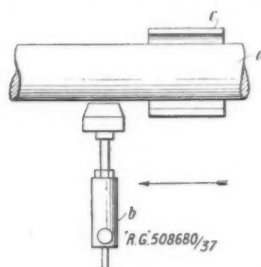
8, the coupling and buffing gears being mounted on the bogies 3, one end of each of which rests on the centre of rotation 2 of a sub-bogie 1, and the bogies 8 being pivoted at 4 to the bogies 3. The body of the locomotive rests on the bogies 8 at the pivot points 9. Each motor bogie is provided with two motors 10 which may be rigidly

mounted in the frame or be in the form of axle motors. When such a locomotive traverses a curve, the centre of rotation 2 of the appertaining bogie 3 follows the first free axle 6, the driving axle 5 thus becoming adjusted for travelling over the curve. It is stated that such a locomotive has a much smaller curve resistance than a single-framed or bogie locomotive and consequently less wear on wheel tyres and rails occurs. The load of the body need not be taken by the pivot points 4 and 9, as laterally disposed resilient supports may be provided. Other modifications are described.—(Accepted June 28, 1939.)

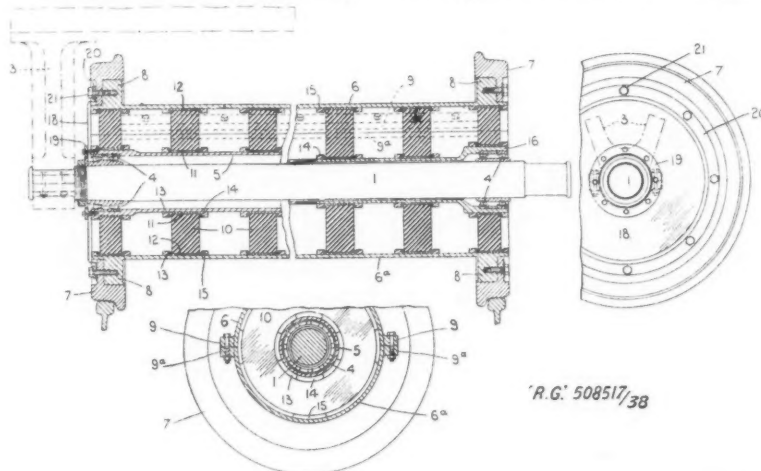
No. 508,680. Hardening Axles, &c.

Adolf Messer, of 314-326, Hanauer Landstrasse, Frankfurt-am-Main, Germany. (Application date: November 29, 1937.)

In a process for hardening an axle *a* in one operation, a blowpipe *b* is passed



along the axle in a longitudinal direction, and the shaft or axle *a* is simultaneously rotated. Moving with and in close lateral association with the blowpipe is a quenching device, comprising a spray *c*, for applying quenching liquid. By such a process, it is stated, the surface is completely hardened, and no soft



points or areas are formed. Furthermore, it is possible to surface harden shafts, axles, &c., of various diameters and any length with the same apparatus. In addition it is possible to apply the process to shafts, axles, &c. each of which have varying diameters or bevelled ends. The use of long sprays is avoided.—(Accepted June 29, 1939.)

No. 508,517. Wheel and Axle Assemblies

William Sebastian Graff-Baker, of 4 Edwardes Square, Kensington, London, W.8. (Application date: January 3, 1938.)

A dead axle 1 rigidly supports the underframe of a vehicle or bogie 2 by means of hanging brackets 3. Roller bearings 4 are provided on which a sleeve 5 rotates, and a cylindrical member 6 is resiliently connected thereto and provided with flanges 8 to which the wheel tyres 7 are bolted or otherwise secured. The member 6 is formed in two longitudinal halves 6, 6a, which are secured by passing bolts through adjacent flanges 9, 9a therein after six indiarubber annuli 10, forming the resilient connection, have been placed in position between metal retaining bushes 11, 12 having marginal lips 13 controlling the flow of distorted rubber. Cleats 14 are removably secured to the sleeve 5 by bolts, these cleats having chamfered faces to engage the inner lips 13. Similar cleats 15 are also provided on the outer sleeve 6. It is preferable that the sleeve 5 lies closely round the axle 1, in which case the said sleeve must be provided with shoulders 16. An end cover for the assembly comprises a diaphragm 18 of flexible indiarubber, the inner margin of which surrounding the axle 1 is secured by a ring 19 bolted to the sleeve 5, whilst the periphery is carried by a ring 20 detachably secured by studs 21 which secure the wheel tyres 7 to the flanges 8 of the cylindrical member 6. The india-

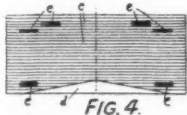
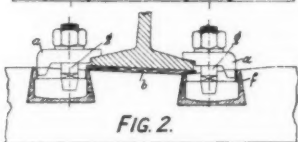
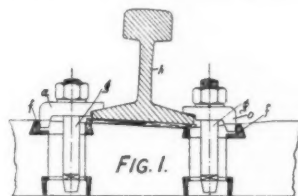
* These abridgments of recently published specifications are specially compiled for THE RAILWAY GAZETTE by permission of the Controller of His Majesty's Stationery Office. Group abridgments can be obtained from the Patent Office, 25, Southampton Buildings, London, W.C.2, either sheet by sheet as issued, on payment of a subscription of 5s. a group volume, or in bound volumes, price 2s. each, and the full specifications can be obtained from the same address price 1s. each.

rubber springs 10 may be replaced by or supplemented with pneumatic elements such as a plurality of segmented, inflatable air cells.—(Accepted July 3, 1939.)

No. 507,618. Sleepers

Societa Anonima Eternit Pietra Artificiale, 8, Piazza Corridoni, Genoa, Italy. (Concession date: August 9, 1937.) (Patent of Addition to No. 466,155 dated April 25, 1936.)

A sleeper, according to the parent patent No. 466,155, made from cement-asbestos with metal reinforcement, comprises a number of cement-asbestos layers superposed when freshly prepared from a pasteboard machine and compressed on to one another and reinforced with metal bars anchored thereto. These thin layers of cement-asbestos are cut out from fresh sheets manufactured on a "round machine" or the like, and the sleeper is gradually compressed up to 5,700 lb. per sq. in. under an hydraulic press. Such an arrangement consists of clamping plates *a* which maintain the rail anchoring bolts *g* in an upright position and prevent displacement of the rail *h*. This may be effected by members *o*, in known manner, and bushes *f* which prevent contact of the bolts *g* with the



'R.G.' 507618/37

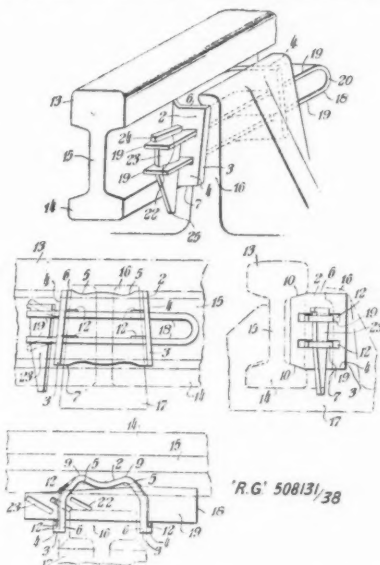
cement-asbestos layers *c*. The upper surface *b* of the layers is shaped, as shown, by compression with a suitable press tool, to cause the sole of the rail to bear on the cement-asbestos without the use of the conventional metal lagging plate. In order to check creeping of the sleepers, cavities or teeth *d* are left on the under surface thereof. Reinforcing metal bars *e* are provided as indicated in Fig. 4. The cement-asbestos should comprise 17.5 per cent. by weight asbestos and 82.5 per cent. slow-hardening Portland cement.—(Accepted June 19, 1939.)

No. 508,131. Rail Keys

Peter Oldall, of the Nizam's State Railway, Secunderabad (Deccan), India. (Application date: May 16, 1938.)

A composite key for securing rails to chairs comprises a steel bent-plate 2 having limbs 4 increasingly and gradually wedge-shaped or splayed so that they are closer at 6 than at 7. Equi-

distant slots 12 are disposed in the plate 2 symmetrically in each limb 4, extending beyond the bevelled portion 10 towards the free ends 3 of the limbs 4. This plate 2 is tapered to fit between the upper and lower flanges 13, 14 of the rail 15, the free ends 3 embracing the edges of a tapered lug 16 of the chair 17. A U-shaped wedge-key 18 is adapted to slide through the slots 12, the legs 19 of the said key being symmetrical about a base 20, and two rows of equal rectangular equally overlapping slots 22 being provided in and aslant of the said legs 19, measuring from the free ends 21



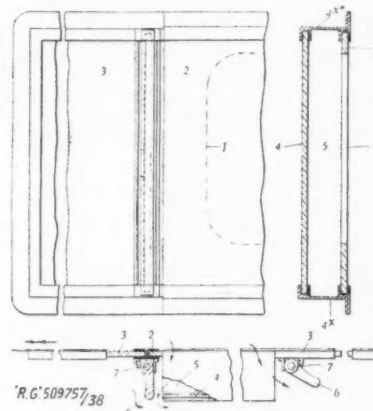
thereof. These slots 22 are adapted to receive locking keys 23 with bases 24 tapering down to apexes 25. The various members of the composite key can all be pressed or stamped from the same thickness of mild steel plate. No parts are made from spring steel, as this would necessitate special tempering, and the said parts might break through rough usage. Suitable dimensions are suggested together with other points in the manufacture of these keys.—(Accepted June 27, 1939.)

No. 509,757. Ventilation of Carriages

Albert Ernest Dufield, of "The Cottage," Fayland Avenue, Streatham Park, London, S.W.16, Ernest John Rawlings, of 65, West Hill, Putney, London, S.W.10, and Rawlings Manufacturing Company Limited, of 1-29, Larch Road, Balham, London, S.W.12. (Application dates: October 20 and November 30, 1937, and January 26, March 30, September 7, and September 23, 1938.)

Ventilation by means of a vehicle window is carried out by providing an air outlet or ventilation gap 1 in a centre panel 2 located between two side panels 3, this assembly being mounted above a glass pane and the whole being arranged in a single window space. A plate 4 is mounted as a hood or cover plate so as to form a draught

chamber or air tunnel 5, the fore and aft ends of which are open, flaps 6 pivoted at 7 near the ends serving as baffles. When the vehicle travels in the direction of the double-headed arrow, the relatively oppositely moving air stream is diverted by the "proud" condition of the hood relative to the



side panels 3 drawing air out between the baffles 6 and the hood 4. The rear baffle 6 swings back as indicated, so permitting a freer passage of air. Several other modifications are described and illustrated.—(Accepted July 20, 1939.)

COMPLETE SPECIFICATIONS ACCEPTED

507,288. White, J. W., and Valberg, C. O. Hopper wagons.

507,459. Brewer, C. E. Rotary valves for internal-combustion or steam engines, or air or water pumps.

507,618. Soc. Anon. Eternit Pietra Artificiale. Sleepers for railways, tramways, and the like.

507,633. Zimmermann, R., and Vonderach, J. Rails, and wheels running thereon.

507,679. Henschel & Sohn, Ges. Steam-driven rail vehicles.

508,131. Oldall, P. Keys for securing rails to chairs and the like.

508,276. Maschinenfabrik Oerlikon. Locomotives.

508,517. Baker, W. S. Graff. Wheel and axle assemblies for railway vehicles.

508,614. Budd Manufacturing Company E. G. Railroad trains.

508,629. Maschinenfabrik Augsburg-Nürnberg A.G. Fuel-injection valves for diesel engines.

508,680. Messer, A. Surface-hardening of shafts, axles, and like long lengths of material.

508,788. Master, S. D. Railways, roads, and the like, also the adaptation, accordingly, of the vehicles travelling thereon.

508,789. British Thomson-Houston Co. Ltd. Electric control systems.

508,807. Roe, L. B. Means for ventilating or introducing fresh air into vehicles.

508,847. British Thomson-Houston Co. Ltd. Electric control systems.

508,895. Worrall, R. W., and Metropolitan-Vickers Electrical Co. Ltd. Mechanical braking systems.

508,948. Tustin, A., and Metropolitan-Vickers Electrical Co. Ltd. Electric motor equipments.

Notes and News

L.N.E.R. Holiday Handbook.—The L.N.E.R. announces that, to meet many requests, the company will again issue its Holiday Handbook in 1940.

L.M.S.R. Holiday Guides in 1940.—As the holiday resorts on the North West Coast, including North and Central Wales, the Lancashire Coast, and the West Coast of Scotland, are expecting an influx of holiday visitors during the 1940 season, the L.M.S.R. has decided to continue the issue of its "Holidays by L.M.S." and Scottish Resorts holiday guides.

G.W.R. "Holiday Haunts" in 1940.—As a result of hundreds of requests from resorts, hotel and boarding-house keepers, and members of the public, the popular G.W.R. "Holiday Haunts" guide is to be published as usual in the spring of 1940. The Guide will be as fully illustrated as previously, despite difficulties of production under existing conditions.

Antofagasta Railway Debenture Stock.—Holders of the 5 per cent. debenture stock of the Antofagasta (Chili) & Bolivia Railway Co. Ltd., approved at a meeting held on November 27 resolutions agreeing to the postponement until January 1, 1943, of the repayment of 40 per cent. of the principal of that stock and the 10 per cent. premium. Sixty per cent. of the principal of the stock is to be paid in cash on the due date, namely January 1, 1940.

Belfast & County Down Railway Wages.—The Railway Wages Board sat in Dublin on November 29 to hear an application for a cessation of the 10 per cent. deduction in salaries and wages which has been in operation for 12 years on the Belfast & County Down Railway. Applicants estimated that the financial position of the company would be £8,000 better at the end of 1939 than it was at the end of 1938. Mr. T. B. Anderson, opposing the application, said that the increase of revenue from all sources at the end of 1939 was £9,500, but the rapidly rising costs of materials

and stores would have to be considered. Even with the increase in receipts the full debenture interest would not be earned this year. The decision of the board was that the 10 per cent. deduction should be reduced to 7½ per cent. from the first pay period of December, 1939, until the further order of the board, liberty being given to either party to apply to the board for a variation of the order at any date after April 1, 1940.

Cloudburst on the Witwatersrand Disorganises Railway Services.—Six inches of rain fell in six hours on November 27 in the worst cloudburst experienced on the East Witwatersrand for 25 years. Floods caused a breakdown of the railway services.

Roumanian Railway Accident.—It is reported by Reuters that on December 1 a special train conveying railway workers became derailed near Sibiu, Central Roumania. The train was carrying materials for a new line between Marsa and Avric, and got out of control on an incline; 20 persons were killed.

Controlling Company for Chinese Transport.—A Reuters message dated November 29 from Chungking, states that all branches of Western China transport are to be controlled by a concern known as the Chinese Transportation Company, according to an official Government announcement. The decision was reached at a cabinet meeting after a recommendation by the Ministry of Communications. The new body will also have under its control the manufacture and distribution of transport equipment.

Canadian Pacific Earnings.—Gross earnings of the Canadian Pacific Railway for October, 1939, amounted to \$16,668,000, a decrease of \$267,000 in comparison with October, 1938. Working expenses totalled \$10,824,000, or \$65,000 less, leaving net earnings \$202,000 lower, at \$5,844,000. For the first ten months of 1939 gross earnings were \$122,112,000, an increase of \$4,831,000 in comparison with the corresponding period of 1938, and the net earnings of \$18,549,000 showed an advance of \$5,172,000.

British and Irish Railway Stocks and Shares

Stocks	Highest 1938	Lowest 1938	Prices	
			Dec. 5, 1939	Rise/ Fall
G.W.R.				
Cons. Ord. . .	651 ₄	253 ₄	30	—½
5% Con. Prefce. . .	1183 ₄	74	86	—
5% Red. Pref. (1950)	1113 ₄	90	92½	—
4% Deb. . .	111	97½	100½	—
4½% Deb. . .	112 ⁵ / ₁₆	100½	102	—
4½% Deb. . .	118½	104	105½	—
5% Deb. . .	131½	119	117½	—
2½% Deb. . .	69 ³ / ₄	60	58½	—
5% Rt. Charge . .	129	114	109	—
5% Cons. Guar. . .	128½	103	107	—
L.M.S.R.				
Ord. . .	301 ₂	11	11½	—¾
4% Prefce. (1923)	70¼	23	40½	+1
4% Prefce. . .	82¼	43 ³ / ₄	58½	—1
5% Red. Pref. (1955)	103½	66	76	—
4% Deb. . .	105½ ¹ / ₁₆	85	92½	—
5% Red. Deb. (1952)	114¼	105	105	—
4% Guar. . .	102¾	77½	82½	—
L.N.E.R.				
5% Pref. Ord. . .	89½ ¹ / ₁₆	31 ₂	3¾	—
Def. Ord. . .	47½	21½	2½	—
4% First Prefce. .	68¼	21	34½	+1
4% Second Prefce. .	27¼	8	9	—½
5% Red. Pref. (1955)	97	40¼	47	+1
4% First Guar. . .	97½	73½	73½	—1
4% Second Guar. .	91¼	63½	63½	—2
3% Deb. . .	79	0	66½	—
4% Deb. . .	119	77	87½	—
5% Red. Deb. (1947)	97	97	100½	—
4½% Sinking Fund Red. Deb.	81½ ₁₆	101	100½	+1
SOUTHERN				
Pref. Ord. . .	87	47½	63	—2
Def. Ord. . .	21¾	9¼	11	—¼
5% Pref. . .	115	83	88	—
5% Red. Pref. (1964)	115½	98	96½	—
5% Guar. Prefce. .	128½	106	106½	—
5% Red. Guar. Pref. (1957)	116	108½	106½	—
4% Deb. . .	109¼	95	100½	—
5% Deb. . .	129	117	116½	+2
4% Red. Deb. . .	107	101½	102½	—
1962-67				
BELFAST & C.D.				
Ord.	4	3½	4	—
FORTH BRIDGE				
4% Deb.	102	99½	87½	—
4% Guar.	103¼	94½	84½	—
G. NORTHERN (IRELAND)				
Ord.	5½	2½	6	—
G. SOUTHERN (IRELAND)				
Ord.	25½	8½	13	—
Prefce.	35	13	23	+½
Guar.	70¼	30½ ¹ / ₃₂	36½	—
Deb.	83	56	54	+1
L.P.T.B.				
4½% "A"	119½	107½	107½	—
5% "A"	130	117	109½	—
4½% "T.F.A." . .	108	98	104*	—
5% "B"	122½ ¹ / ₁₆	105	105½	—
"C"	84	68	65½	—
MERSEY				
Ord.	24¼	16½	18½	+1
4% Perp. Deb. . .	10278	94¾	90	—
3% Perp. Deb. . .	77	69	65½	—
3% Perp. Prefce. .	66½	5	52½	—

* ex dividend

Irish Traffic Returns

IRELAND	Totals for 48th Week			Totals to Date		
	1939	1938	Inc. or Dec.	1939	1938	Inc. or Dec.
Belfast & C.D. (80 miles)						
pass.	2,084	1,571	+ 513	124,973	118,523	+ 6,450
goods	581	469	+ 112	22,696	21,168	+ 1,528
total	2,665	2,040	+ 625	147,669	139,691	+ 7,978
Great Northern (543 miles)						
pass.	8,950	7,850	+ 1,100	540,700	529,600	+ 11,100
goods	16,600	10,900	+ 5,700	533,550	451,000	+ 82,550
total	25,550	18,750	+ 6,800	1,074,250	980,600	+ 93,650
Great Southern (2,076 miles)						
pass.	28,070	28,647	— 577	1,757,740	1,763,027	— 5,287
goods	59,359	55,727	+ 3,632	2,187,327	2,011,663	+ 175,664
total	87,429	84,374	+ 3,055	3,945,067	3,774,690	+ 170,377
L.M.S.R. (N.C.C.) (271 miles)						
pass.	3,910	3,130	+ 780	225,660	216,460	+ 9,200
goods	3,570	2,810	+ 760	146,780	127,090	+ 19,690
total	7,480	5,940	+ 1,540	372,440	343,550	+ 28,890

OFFICIAL NOTICES

Canadian National Railway Company

WELLINGTON GREY & BRUCE RAILWAY COMPANY, 7 PER CENT. BONDS.

At the semi-annual ballot for November, 1939, the following Wellington Grey & Bruce Railway Company 7 per cent. Bonds were drawn, and will be paid at par at the offices of the Canadian National Railway Company in Montreal, Canada, or at Orient House, 42-5, New Broad Street, London, E.C.2, England, on the 1st January next, that is to say, Bonds numbered:—

130, 183, 328, 648, 882, 1074, 1235, 1558, 1660, 1812, 1924, 2012, 2059, 2062, 2169, 2203, 2256, 2320, 2348, 2390, 2446, 2485, 2516, 2520, 2798, 2799, 2821, 2887, 2951, 3065, 3288, 3337, 3431, 3516, 3694, 3825, 3899, 3923, 4016, 4036, 4150, 4279, 4309, 4392, 4415, 4431, 4443, 4840, 4853, 4883, 4988, 5022, 5072, 5104, 5177, 5223, 5237, 5271, 5284.

In all £5,900 sterling.

Holders of these Bonds will take notice that the interest will cease after 1st January next.

A. H. CONEYBEARE,

European Secretary and Treasurer.

London.

2nd December, 1939.

Canadian National Railway Company

WELLINGTON GREY & BRUCE RAILWAY COMPANY, 7 PER CENT. BONDS.

NOTICE IS HEREBY GIVEN That the estimated earnings of the Wellington Grey & Bruce Railway Company for the half-year ending 31st December, 1939, applicable to meet interest on the above Bonds, will admit of the payment of £4.1.11 per £100 Bond, and that this payment will be applied as follows, viz.:—

£0.11.11 in final discharge of Coupon No. 115 due 1st January, 1928; and £3 10. 0 in full payment of Coupon No. 116, due 1st July, 1928, and will be made on and after 1st January next at the offices of the Canadian National Railway Company, Orient House, 42-5, New Broad Street, London, E.C.2, England.

The coupons must be left three clear days for examination.

A. H. CONEYBEARE,

European Secretary and Treasurer.

London.

2nd December, 1939.

The Institute of Transport Examinations, 1940.

THE Graduateship and Associate Membership Examinations will be held, circumstances permitting, on May 6th, 7th, and 8th, 1940, at Centres to be announced later. March 31st is the closing date for the deposit of forms of entry but intending candidates for the Graduateship and Associate Membership Examinations must have submitted forms of recommendation for Studentship or Graduateship respectively before January 31st, 1940.

Particulars of the Institute and its examinations, together with previous examination question papers (price 1s. per set, post free), and copies of the Institute Examination Guide for prospective candidates (price 2s. 6d., post free), may be obtained from the undersigned.

A. WINTER GRAY,

Secretary.

15 Savoy Street,

London, W.C.2.

RAILWAY AND OTHER REPORTS

Manila Railway Co. (1906) Ltd.—

A dividend of 1 per cent., less tax, is being paid on the 5 per cent. non-cumulative preference shares, the same as a year ago.

Bengal-Dooars Railway Co. Ltd.—

Gross earnings for the year to March 31, 1939, were Rs. 19,68,760, an increase of Rs. 19,087 in comparison with the previous year. In the working expenses of Rs. 11,73,036 there was an advance of Rs. 6,620, reducing the operating ratio from 59.83 per cent. to 59.58 per cent. Net earnings were, therefore, Rs. 7,95,724, an increase of Rs. 12,467. In sterling, less Indian taxation, the net earnings realised £51,306, against £53,476 for 1937-38. The amount at credit of net revenue account is £81,332, from which the directors have placed £10,000 to reserve fund, and recommend a final dividend of 3½ per cent. for the year, which will require £14,000, and leave £57,332 to be carried forward.

Assam-Bengal Railway Co. Ltd.—

The gross earnings for the year ended March 31, 1939, amounted to Rs. 2,04,29,268, an increase of Rs. 17,15,105 in comparison with 1937-38. In the working expenses of Rs. 1,56,40,447 there was a saving of Rs. 4,260, so that the operating ratio was reduced from 83.60 per cent. to 76.56 per cent. and the net earnings improved from Rs. 30,69,456 to Rs. 47,88,821. Ordinary working expenses, excluding replacements and renewals and payments to worked lines, were Rs. 1,25,46,223 or 61.41 per cent. of gross earnings, as compared with Rs. 1,22,05,422 and 65.22 per cent. in 1937-38. Passenger earnings improved from Rs. 66,98,956 to Rs. 72,00,345 and goods traffic earnings from Rs. 1,02,85,897 to Rs. 1,17,10,388. No surplus profits accrued in the year under review and the directors propose to carry forward the balance of £1,899 standing at credit of stockholders' revenue account. Guaranteed interest

at the rate of 3 per cent. (less income tax) on the company's stock capital of £1,500,000 was received from the Secretary of State during the year.

Wellington Grey & Bruce Railway Company.—

Estimated earnings for the half-year ending December 31, 1939, applicable to meet interest on the 7 per cent. bonds, will admit of the payment on January 1, 1940, of £4 1s. 11d. per £100 bond. This payment will be applied as follows:—11s. 11d. in final discharge of Coupon No. 115 due January 1, 1928, and £3 10s. in full payment of Coupon No. 116 due July 1, 1928.

Buenos Ayres Midland Railway Co. Ltd.—

The report for the year to June 30 last of this company, which is controlled jointly by the Buenos Ayres Great Southern and the Buenos Ayres Western Railway Companies, shows that the rent received from the working companies was £164,272, compared with £164,767 for the previous year. The amount brought forward was £1,562. After paying £8,272 for administration expenses, N.D.C., interest on advances by working companies, and directors' fees, £96,000 for debenture interest, £40,000 for preference dividend, and £20,000 for the usual 4 per cent. ordinary dividend, there is a balance of £1,562 to be carried forward.

William Asquith Limited.—

Profit for the period August 12, 1938, to August 17, 1939, after charging all expenses of management and depreciation, was £93,302. A dividend of 5 per cent. per annum on the ordinary shares is recommended; the provision for taxation is £50,000, and it is proposed to transfer £20,000 to general reserve, leaving £30,632 to be carried forward, as against £20,555 brought in. The directors consider the results of the period under review satisfactory. They state that 47 per cent. of the turnover

of the company comes within the category of export trade during the period covered by the present accounts.

Guest Keen & Nettlefolds Limited.

—An interim dividend of 2½ per cent. actual, tax free, on the ordinary capital, will be paid on December 19. A similar distribution was made last year.

Sentinel Waggon Works (1936) Limited.—

A dividend of 12 per cent. is to be paid on the 6 per cent. cumulative preference shares for the two years to December 31, 1938.

Chloride Electrical Storage Co.

—Interim dividends in respect of the year to March 31, 1940, were paid on December 1, of 5 per cent. on the ordinary A and B stocks, less tax, the same as a year ago.

Central Wagon Co. Ltd.—

A final dividend of 5 per cent. and a bonus of 2 per cent. are announced, bringing the total distribution for the year ended September 30, 1938, to 10 per cent., the same as for the previous year.

Vokes Limited.—

Net profit, after providing for taxation, for the year ended June 30, 1939, amounted to £21,172, compared with £2,248 for 1937-38. The directors transfer £10,250 to reserves, write down goodwill, patents etc., by £4,193, recommend a dividend of 12½ per cent., against nil, and propose to carry forward £2,733, against £2,253 brought in.

Birmid Industries Limited.—

A profit of £118,109 for the year ended October 31, 1939, against £78,419 for 1937-38, is shown by this company, which controls a group of undertakings engaged in the manufacture of aluminium castings, motor cylinders, &c. A cash payment of 15 per cent. (against 12½ per cent.) is to be made on the shares, and in addition a 50 per cent. scrip bonus is proposed. The sum of £60,000 is allocated to reserve, and £21,557 is to be carried forward, against £30,236 brought in. The combined output of the subsidiaries during the year was a record.

Railway Share Market

Pending the next turn of events in international affairs there has been little disposition for business on the Stock Exchange to improve, and movements in values were small and relatively unimportant. Sentiment benefited from the reduction in the unemployed shown by the latest return, and with the development of firmer markets, there has been an increase of speculative activity in the junior preference and ordinary stocks of the home railways. As a result prices at one time regained most of an earlier reaction and in some cases nearly returned to the levels ruling at the middle of last week. The market remains hopeful of an early statement as to compensation for the wartime services of the railways, and it continues to be assumed that this will be fair and equitable to stockholders. According to prevailing market views, compensation is likely to be such as will permit of full dividend payments on such stocks as L.N.E.R. first preference, L.M.S.R. 1923 preference, and Southern preferred, all of which would at current prices give attractive yields on this basis. Moreover in some quarters there are hopes that small payments may be possible on L.M.S.R. ordinary and L.N.E.R. second preference. In

respect of Great Western ordinary the belief is that dividends of 3 per cent. or more per annum should be possible during the war period. These market anticipations must, of course, be regarded as having no very solid basis, but they explain the upward movement in prices and also the view that the junior stocks are undervalued at current levels. Debentures have shown a very steady tendency and recent gains were virtually maintained.

Following a sharp reaction, Southern preferred rallied to 64, which, however, compares with 65½ a week ago, and later the price reacted to 63. The deferred stock showed a decline from 11½ to 10½. The 5 per cent. preference moved up a point to 88½, and the 5 per cent. guaranteed at 107½ shows a similar gain, while the 4 per cent. debentures were fractionally higher at 100½. A good deal of activity was reported in L.M.S.R. 1923 4 per cent. preference, which is slightly higher on the week at 40½, and offers a good yield assuming the market is correct in its view that this stock has reasonable prospects of receiving its full dividend throughout the war period. L.M.S.R. 4 per cent. first preference at 58½ has held all but a point of the rise recorded

a week ago, while the 5 per cent. debentures were unchanged at 105 and the 4 per cent. debentures were 92, compared with 92½ a week ago. The 4 per cent. guaranteed lost a point to 82, at which the yield is fully 4½ per cent., and it is, of course, taken for granted that this stock is assured of its full dividend. Among L.N.E.R. issues the first guaranteed and second guaranteed at 73 and 64 respectively have each lost a point. On the other hand the first preference at 34½ showed a small improvement on balance. A reaction from 9½ to 8½ was made in the price of the second preference stock, but the 4 per cent. debentures remained at 87 and the 3 per cent. debentures at 66. Great Western ordinary fluctuated rather sharply, but on balance was little changed at 30. The 5 per cent. guaranteed was 107 and the 5 per cent. preference kept at 86, while the 4 per cent. debentures were slightly higher at 100½.

Among foreign railway securities conditions have been less active and prices lost part of their recent rally. Debentures of the leading Argentine companies appeared to be in short supply in the market. B.A. Gt. Southern 4 per cent. debentures were moderately better at 64, but the 5 per cent. preference went back,

Traffic Table of Overseas and Foreign Railways Publishing Weekly Returns

Railways	Miles open 1938-39	Week Ending	Traffic for Week		No. of Weeks	Aggregate Traffic to Date			Shares or Stock	Prices							
			Total this year	Inc. or Dec. compared with 1938		Totals		Increase or Decrease		Highest 1938	Lowest 1938	Dec. 1939	Yield % (See Note)				
						This Year	Last Year										
South & Central America	Antofagasta (Chili) & Bolivia	834	26.11.39	21,920	+	£ 8,010	47	648,200	706,140	-	£ 57,940	Ord. Stk.	14	71½	91½	Nil	
	Argentine North Eastern	753	25.11.39	ps. 135,200	+	ps. 9,200	22	ps. 3,565,500	ps. 3,690,700	-	ps. 125,200	"	61½	2	21½	Nil	
	Bolivar	174	Nov. 1939	4,680	+	1,780	48	47,530	40,100	+	7,430	6 p.c. Deb.	8	7	7	Nil	
	Brazos	—	—	—	—	—	—	—	—	—	—	Bonds	10	4	6	85½	
	Buenos Ayres & Pacific	2,801	25.11.39	ps. 1,260,000	-	ps. 57,000	22	ps. 25,448,000	ps. 25,092,000	+	ps. 356,000	Ord. Stk.	61½	31½	4	Nil	
	Buenos Aires Central	190	21.11.39	\$107,700	-	\$5,400	17	\$1,934,600	\$2,045,700	-	\$111,100	Mt. Deb.	15½	8	13	Nil	
	Buenos Ayres Gt. Southern	5,082	25.11.39	ps. 2,336,000	+	ps. 253,000	22	ps. 41,468,000	ps. 42,638,000	-	ps. 1,170,000	Ord. Stk.	179½	81½	81½	Nil	
	Buenos Ayres Western	1,930	25.11.39	ps. 894,000	+	ps. 71,000	22	ps. 15,003,000	ps. 13,933,000	+	ps. 1,070,000	"	123½	5	7	Nil	
	Central Argentine	3,700	25.11.39	ps. 1,763,300	+	ps. 91,600	22	ps. 39,880,350	ps. 35,529,350	+	ps. 4,351,000	"	13½	53½	8	Nil	
	Do.	—	—	—	—	—	—	—	—	—	—	Divd.	6	21½	21½	Nil	
	Cent. Uruguay of M. Video	972	25.11.39	25,483	+	7,075	22	372,458	376,560	-	4,102	Ord. Stk.	3	11½	21½	Nil	
	Costa Rica	188	June 1939	25,240	-	6,129	52	270,756	314,399	-	43,643	Stk.	28	221½	221½	87½	
	Dorada	70	Oct. 1939	13,000	-	2,800	43	136,700	163,800	-	27,100	1 Mt. Db.	105½	104	102½	5½	
	Entre Rios	810	25.11.39	ps. 193,600	-	ps. 26,300	22	ps. 5,395,100	ps. 5,415,700	-	ps. 20,600	Ord. Stk.	71½	31½	5	Nil	
	Great Western of Brazil	1,016	25.11.39	14,300	+	600	47	409,100	352,500	+	56,600	Ord. Sh.	31½	1½	51½	Nil	
	International of Cl. Amer.	794	Sept. 1939	\$862,984	-	\$8,355	39	\$4,486,381	\$4,189,953	+	\$296,428	"	—	—	—	Nil	
	Interoceanic of Mexico	—	—	—	—	—	—	—	—	—	—	—	1st Pref.	6d.	6d.	10	Nil
	La Guaira & Caracas	22½	Nov. 1939	7,055	+	3,060	48	67,780	57,105	+	10,675	Stk.	8	61½	71½	Nil	
	Leopoldina	1,918	25.11.39	24,633	+	104	47	994,643	1,009,238	-	14,595	Ord. Stk.	4	1	21½	Nil	
	Mexican	483	31.10.39	\$356,700	-	\$18,700	17	\$4,660,100	\$4,650,500	+	\$9,600	"	4	1½	18	Nil	
	Midland of Uruguay	319	Oct. 1939	8,389	-	921	18	34,490	34,366	+	124	"	7½	16	18	Nil	
	Nitrate	386	30.11.39	5,325	-	567	48	110,420	132,806	-	22,386	Ord. Sh.	52½	19½	15½	71½	
	Paraguay Central	274	25.11.39	\$3,520,000	+	\$1,021,000	22	\$67,797,000	\$64,346,000	+	\$3,451,000	Pr. Li. Stk.	60	55½	35	15½	
	Peruvian Corporation	1,059	Nov. 1939	61,795	-	536	22	316,494	340,673	-	24,179	Pref.	55½	13½	2	Nil	
	Salvador	100	28.10.39	48,784	-	47,416	18	4165,670	4199,461	-	433,791	Pr. Li. Db.	23	20	15	Nil	
	San Paulo	133½	19.11.39	33,687	+	4,984	46	1,438,727	1,481,584	-	42,857	Ord. Stk.	64	28	37	55½	
	Talital	160	Oct. 1939	3,360	-	525	17	7,785	11,785	-	4,000	Ord. Sh.	13½	1	9½	87½	
	United of Havana	1,353	25.11.39	15,371	+	2,925	22	364,859	342,314	+	22,545	Ord. Stk.	38½	12	1	Nil	
	Uruguay Northern	73	Oct. 1939	962	-	158	18	3,634	3,899	-	265	Deb. Stk.	2	1	2	Nil	
Canada	Canadian National	23,691	21.11.39	967,630	+	205,467	46	35,653,734	32,389,290	+	3,264,444	—	—	—	—	—	
	Canadian Northern	—	—	—	—	—	—	—	—	—	4 p.c.	Perp. Dbs.	72	60	73	51½	
	Grand Trunk	—	—	—	—	—	—	—	—	—	4 p.c. Gar.	104	90	98½	41½		
Canadian Pacific	17,171	21.11.39	733,600	+	176,600	46	26,558,800	25,254,800	+	1,304,000	Ord. Stk.	87½	41½	7	Nil		
India	Assam Bengal	1,329	20.10.39	53,865	+	4,561	28	833,438	784,446	+	48,992	Ord. Stk.	81½	70	621½	415½	
	Barsi Light	202	31.10.39	2,565	-	2,647	29	66,930	84,112	-	17,182	Ord. Sh.	60½	541½	45	87½	
	Bengal & North Western	2,112	10.11.39	67,621	-	24,017	6	267,237	302,285	-	35,048	Ord. Stk.	311	278	233	75½	
	Bengal Doonars & Extension	161	20.11.39	4,971	-	1,28	32	91,440	98,676	-	7,236	"	89	83	87½	77½	
	Bengal-Nagpur	3,267	10.11.39	221,475	+	24,758	30	4,717,680	4,161,137	+	556,543	"	95½	90	83½	415½	
	Bombay, Baroda & Cl. India	2,986	30.11.39	294,750	+	49,650	34	5,703,225	5,697,675	+	5,550	"	1127½	95	99½	6	
	Madras & Southern Mahratta	2,967	10.11.39	132,825	-	15,604	30	3,419,530	3,327,051	+	92,479	"	108	97	99½	71½	
Rohilkund & Kumaon	546	10.11.39	13,747	+	682	6	50,995	51,988	-	993	"	308	285	240	71½		
South Indian	2,531½	31.10.39	114,034	+	5,984	29	2,428,185	2,436,794	-	8,609	"	104	101	87½	51½		
Various	Beira	204	Sept. 1939	83,772	-	—	52	971,039	—	—	—	—	—	—	—	—	
	Egyptian Delta	623	10.8.39	5,875	+	486	19	67,548	65,905	+	1,643	Prf. Sh.	—	5/6	2½	Nil	
	Kenya & Uganda	1,625	May 1939	206,557	-	11,295	21	1,220,870	1,309,332	-	88,462	B. Deb.	49	41	47	77½	
	Manila	—	—	—	—	—	—	—	—	—	—	Inc. Deb.	93½	89	89	41½	
	Midland of W. Australia	277	Sept. 1939	13,513	-	3,516	13	36,618	44,686	-	8,068	"	—	—	—	—	
	Nigerian	1,900	16.9.39	29,509	-	5,291	25	671,056	735,137	-	64,081	"	—	—	—	—	
	Rhodesia	2,442½	Sept. 1939	400,529	-	—	52	4,413,769	—	—	—	—	—	—	—	—	
	South Africa	3,284	4.11.39	650,001	-	5,199	32	20,390,157	19,269,626	+	1,120,531	"	—	—	—	—	
Victoria	4,774	Aug., 1939	698,267	-	64,636	9	1,383,157	1,479,248	+	96,091	"	—	—	—	—		

NOTE. Yields are based on the approximate current prices and are within a fraction of 1/16 Argentine traffic is now given in pesos.

† Receipts are calculated @ 1s. 6d. to the rupee.

§ ex dividend